

William F. Calve, NORTON ROSE FULBRIGHT US LLP, 300 Convent Street, Suite 2100, San Antonio, Texas 78205-3792, Telephone: (210) 270-7132, Facsimile: (210) 270-7205, william.calve@nortonrosefulbright.com

Pursuant to Rule 26(a)(2)(A) of the Federal Rules of Civil Procedure and the Court's scheduling order, as extended by agreement of the parties, Defendants Waller County, Texas, the Waller County Commissioners Court, Judge Carbett "Trey" J. Duhan, III, in his Official Capacity as Waller County Judge, and Christy A. Eason, in her official capacity as the Waller County Elections Administrator hereby make the following expert disclosures.

Section 1. Expert Witness Designation.

Section 2. Expert Witness Report and Resumes

SECTION 1

DESIGNATION OF EXPERT

1. Dr. James G. Gimpel, Ph. D.

Professor of Political Science
Department of Government and Politics
University of Maryland

In accordance with the Court's Scheduling Order and Defendants' Expert Designation, served August 1, 2019, Defendants make the following disclosures regarding their retained expert, Dr. James G. Gimpel Ph. D. Dr. Gimpel is generally expected to testify as to the impact and sufficiency of the early voting schedule adopted by Waller County in the 2018 general election, as well as offer his opinion on the opinions and reports of the experts designated by the Plaintiffs. Dr. Gimpel's curriculum vitae is attached as Exhibit 1 to this designation. Dr. Gimpel is a retained expert in the areas of political science, political behavior, elections, political geography, and redistricting. Please see a copy of Dr. Gimpel's attached CV for a more comprehensive description of his experience and education.

Dr. Gimpel's opinions are based on his education, research, experience and review of the documents and materials relevant to the above-styled suit. The materials reviewed by Dr. Gimpel in forming his opinions include the records exchanged by the parties in discovery, the materials (spreadsheets and shapefiles) provided by Plaintiffs' expert, Dr. Robert Stein, the materials produced with this disclosure, the reports and supporting materials, if any, of Plaintiffs' experts, and the pleadings on file in this case.

The opinions to be expressed by Dr. Gimpel, and the bases for them, are contained in his expert report, which is provided as Exhibit 2 to this disclosure. Dr. Gimpel may also provide rebuttal or impeachment testimony as relevant in this case, and the Defendants reserve the right

to supplement this designation with the subjects of his rebuttal or impeachment testimony. Defendants further note that the parties are still in the early stages of discovery in this case and reserves the right to supplement this disclosure based upon further investigation, further development of applicable facts, or its receipt and review of additional information from the Plaintiffs.

2. Plaintiffs' Designated Experts

Defendants further reserve the right to call as an expert witness or to elicit, by way of direct or cross examination, opinion testimony from experts designated by Plaintiffs, regardless of whether the designation is subsequently withdrawn. By this designation, Defendants do not attest to or vouch for the qualifications of those experts, or assert any particular agreement with those experts' opinions. Defendants reserve the right to agree with, or disagree with, the opinions of those experts, and further reserves the right to challenge the qualifications and/or opinions of any expert witness designated by Plaintiffs. Defendants make this designation simply to put Plaintiffs on notice that any such other experts may be called by Defendants to testify, either live or by deposition.

3. Right to Supplement

Defendants reserve the right to supplement this disclosure to reflect any additional opinions that any of the above experts may reach as a result of continuing analysis or additional information developed through discovery, and to designate experts to rebut any opinion to be given by experts designated by other parties.

SECTION 2

EXPERT REPORT AND RESUMES

In accordance with the Court's scheduling order, the following materials are being produced and disclosed to Plaintiffs, but they are not being filed:

Exhibit 1 – Curriculum vitae of Dr. James G. Gimpel

Exhibit 2 – Expert Report of Dr. James G. Gimpel

Dated: September 10, 2019.

Respectfully submitted,

BICKERSTAFF HEATH
DELGADO ACOSTA LLP
3711 South MoPac Expressway
Building One, Suite 300
Austin, Texas 78746
512-472-8021 (Telephone)
512-320-5638 (Facsimile)

By: /s/ Gunnar P. Seaquist
Gunnar P. Seaquist
Texas State Bar No. 24043358
Southern District No: 1140733
gseaquist@bickerstaff.com
C. Robert Heath
Texas State Bar No. 09347500
Southern District No. 13381
bheath@bickerstaff.com

ATTORNEYS FOR ALL DEFENDANTS

CERTIFICATE OF SERVICE

This is to certify that on September 10, 2019, a true and correct copy of the foregoing document was served on all counsel of record via email.

/s/ Gunnar P. Seaquist
Gunnar P. Seaquist

EXHIBIT 1

June 2019

James G. Gimpel

Department of Government and Politics

University of Maryland

College Park, MD 20742

(301)-405-7929 (office)

jgimpel AT umd.edu

Personal:

Current residence: Columbia, Maryland.

Current Position:

University of Maryland - College Park.

Full Professor, August 2001-present.

Editor, *American Politics Research*, 2003-2011 (eight years)

Associate Professor with tenure, August 1997-August 2001.

Assistant Professor, January 1992-August 1997.

Education:

University of Chicago. Ph.D. Political Science, 1990.

University of Toronto. M.A. Political Science, 1985.

Drake University. B.A. with honors. Political Science, 1984.

Books:

- ▶ Dante Chinni and James G. Gimpel. 2010. *Our Patchwork Nation: The Twelve Community Types that Make Up Our Nation* (New York, NY: Gotham, a Penguin imprint).
- ▶ James G. Gimpel, J. Celeste Lay and Jason E. Schuknecht. 2003. *Cultivating Democracy: Civic Environments and Political Socialization in America* (Washington, DC: Brookings Institution Press).
- ▶ James G. Gimpel and Jason E. Schuknecht. 2003. *Patchwork Nation: Sectionalism and Political Change in American Politics* (Ann Arbor, MI: University of Michigan Press).
- ▶ James G. Gimpel. 1999. *Separate Destinations: Migration, Immigration and the Politics of Places* (Ann Arbor, MI: University of Michigan Press).
- ▶ James G. Gimpel and James R. Edwards, Jr. 1999. *The Congressional Politics of Immigration Reform* (Needham Heights, MA: Allyn and Bacon).
- ▶ James G. Gimpel. 1996. *National Elections and the Autonomy of American State Party Systems* (Pittsburgh, PA: University of Pittsburgh Press).
- ▶ James G. Gimpel. 1996. *Fulfilling the Contract: The First 100 Days* (Needham Heights, MA: Allyn and Bacon). Published in hardcover under the title: *Legislating the Revolution: The Contract with America in its First 100 Days*.

Articles in Peer Reviewed Journals:

- 1 Caroline Carlson and James G. Gimpel. 2019. "Political Implications of Residential Mobility and Stasis on
the Partisan Balance of Locales." *Political Geography*. Accepted and Forthcoming.
- 2 Wendy K. Cho, James G. Gimpel and Iris Hui. 2019. "Migration as an Opportunity to Register Changing Party
Loyalty in the U.S." *Population, Space and Place*. Accepted and Forthcoming.
- 3 James G. Gimpel and James H. Glenn. 2019. "Racial Proximity and Campaign Contributing." *Electoral
Studies*. 57: 1: 79-89.
- 4 James G. Gimpel and Iris Hui. 2018. "Political Fit as a Component of Neighborhood Preference and
Satisfaction." *City and Community*. 17: 3: 883-905.
- 5 James G. Gimpel and Iris Hui. 2017. "Inadvertent and Intentional Partisan Residential Sorting." *Annals of
Regional Science* 58: 3: 441-468.
- 6 James G. Gimpel and Iris Hui. 2015. "Seeking Compatible Neighbors: Partisan Composition, Neighborhood
Selection and Residential Sorting." *Political Geography* 48: 4: 130-142.
- 7 James G. Gimpel, Frances E. Lee and Michael Parrott. 2014. "Business Interests and the Party Coalitions:
Industry Sector Contributions to U.S. Congressional Campaigns." *American Politics Research* 42: 6: 1034-
1076.
- 8 Wendy K. Cho, James G. Gimpel and Iris Hui. 2013. "Voter Migration and the Geographic Sorting of the
American Electorate." *Annals of the Association of American Geographers* 103: 4: 856-870.
- 9 James G. Gimpel, Frances E. Lee and Rebecca U. Thorpe. 2012. "The Distributive Politics of the Federal
Stimulus: The Geography of the ARRA of 2009." *Political Science Quarterly* 127: 4: 567-596.
- 10 Daron R. Shaw, Alan Gerber, James G. Gimpel and Donald P. Green. 2012. "Do Robotic Calls from Credible
Sources Influence Voter Turnout or Vote Choice? Evidence from a Randomized Field Experiment." *Journal
of Political Marketing* 11: 4: 241-249.
- 11 Wendy K. Cho, James G. Gimpel and Daron R. Shaw. 2012. "The Tea Party Movement and the Geography
of Collective Action." *Quarterly Journal of Political Science* 7: 2: 105-133.
- 12 Wendy K. Cho and James G. Gimpel. 2012. "GIS and the Spatial Dimensions of American Politics." *Annual
Review of Political Science* 15: 443-460.
- 13 Daron R. Shaw and James G. Gimpel. 2012. "What if We Randomized the Governor's Schedule? Evidence
on Campaign Appearance Effects from a Texas Experiment." *Political Communication* 29: 2: 137-159.
- 14 Scott L. Althaus, Brittany J. Bramlett and James G. Gimpel. 2012. "When War Hits Home: The Geography
of Military Losses and Support for War in Time and Space." *Journal of Conflict Resolution* 56: 3: 382-412.
- 15 Andrew Reeves and James G. Gimpel 2012. "Ecologies of Unease: Geographic Context and National
Economic Evaluations." with Andrew Reeves. *Political Behavior* 34: 3: 392-420.
- 16 Alan Gerber, James G. Gimpel, Donald P. Green and Daron R. Shaw. 2012. "How Large and Long-lasting
Are the Persuasive Effects of Televised Campaign Ads? Results from a Randomized Field Experiment." *American Political Science Review* 105: 1: 135-150.
- 17 Brittany H. Bramlett, James G. Gimpel and Frances E. Lee. 2011. "The Political Ecology of Opinion in Big-
Donor Neighborhoods." *Political Behavior* 33: 4: 565-600.
- 18 Wendy K. Cho and James G. Gimpel. 2010. "Rough Terrain: Spatial Variation in Contributions of Time and
Money to an Election Campaign." *American Journal of Political Science* 54: 1: 74-89.
- 19 Scott L. Althaus, Anne M. Cizmar and James G. Gimpel. 2009. "Media Supply, Audience Demand and the
Geography of News Consumption in the United States." *Political Communication* 26: 3: 249-277.

Articles in Peer Reviewed Journals (cont'd.):

- 20 James G. Gimpel and J. Celeste Lay. 2008. "Political Socialization and Reactions to Immigration-Related Diversity in Rural America." *Rural Sociology* 73: 2:180-204.
- 21 James G. Gimpel, Frances E. Lee and Shanna Pearson-Merkowitz. 2008. "The Check is in the Mail: Interdistrict Funding Flows in Congressional Elections." *American Journal of Political Science* 52: 2: 373-394
- 22 James G. Gimpel, Kimberly Karnes, John McTague and Shanna Pearson-Merkowitz. 2008. "Distance-Decay in the Political Geography of Friends-and-Neighbors Voting." *Political Geography* 27: 2: 231-252.
- 23 James G. Gimpel, Karen M. Kaufmann and Shanna Pearson-Merkowitz. 2007. "The Battleground vs. the Blackout States: Behavioral Implications of Modern Presidential Campaigns." *Journal of Politics* 69: 3: 786-797.
- 24 Wendy K. Cho and James G. Gimpel. 2007. "Prospecting for (Campaign) Gold." *American Journal of Political Science* 51: 2: 255-268.
- 25 Wendy K. Cho, James G. Gimpel and Tony Wu. 2007. "Spatial Surges in Arab American Voter Registration." *Political Geography* 26: 3: 330-351.
- 26 James G. Gimpel, Joshua J. Dyck and Daron R. Shaw. 2007. "Election Year Stimuli and the Timing of Voter Registration." *Party Politics* 13: 3: 347-370.
- 27 Wendy K. Cho, James G. Gimpel and Tony Wu. 2006. "Clarifying the Role of Socioeconomic Status in Political Participation: Policy Threat and Arab American Mobilization." *Journal of Politics* 68: 4: 977-991.
- 28 James G. Gimpel, Frances E. Lee and Joshua Kaminski. 2006. "The Political Geography of Campaign Contributions in American Politics." *Journal of Politics* 68: 3: 626-639.
- 29 Wendy K. Cho, James G. Gimpel and Joshua J. Dyck. 2006. "Residential Concentration, Political Socialization and Voter Turnout." *Journal of Politics* 68: 1: 156-167.
- 30 James G. Gimpel, Joshua J. Dyck and Daron R. Shaw. 2006. "Location, Knowledge and Time Pressures in the Spatial Structure of Convenience Voting." *Electoral Studies* 25: 1: 35-58.
- 31 James G. Gimpel and Joshua J. Duck. 2005. "Distance, Turnout and the Convenience of Voting." *Social Science Quarterly* 86: 3: 531-548.
- 32 James G. Gimpel, Joshua J. Dyck and Daron R. Shaw. 2004. "Registrants, Voters and Turnout Variability Across Neighborhoods." *Political Behavior* 26:4: 343-375.
- 33 Wendy K. Cho and James G. Gimpel. 2004. "The Persistence of White Ethnicity in New England Politics," *Political Geography* 23: 8: 821-832.
- 34 James G. Gimpel, Irwin L. Morris and David R. Armstrong. 2004. "Turnout and the Local Age Distribution: Examining Political Participation Across Space and Time." *Political Geography* 23:1: 71-95
- 35 James G. Gimpel and Jason E. Schuknecht. 2003. "Political Participation and the Accessibility of the Ballot Box." *Political Geography* 22: 4: 471-488.
- 36 Karen M. Kaufmann, James G. Gimpel and Adam Hoffmann. 2003. "A Promise Fulfilled? Open Primaries and Representation." *Journal of Politics* 65: 2: 457-476.

Articles in Peer Reviewed Journals (cont'd.):

- 37 James G. Gimpel and Jason E. Schuknecht. 2002. "Reconsidering Regionalism in American State Politics." *State Politics and Policy Quarterly* 2: 4: 325-352.
- 38 James G. Gimpel and Jason E. Schuknecht 2002. "Political and Demographic Foundations for Sectionalism in State Politics: the Connecticut Case." *American Politics Research* 30: 2: 193-213.
- 39 James G. Gimpel and Jason E. Schuknecht 2001. "Interstate Migration and Electoral Politics," *Journal of Politics* 62:1: 207-231.
- 40 Peter F. Burns and James G. Gimpel. 2000. "Prejudice, Economic Insecurity, and Immigration Policy," *Political Science Quarterly* 115: 2 (2000) 201-225
- 41 James G. Gimpel. "Contemplating Congruence in State Party Systems," 1999. *American Politics Quarterly* 27: 1 (1999) 133-140.
- 42 James G. Gimpel and Robin M. Wolpert. 1998. "Self-Interest, Symbolic Politics and Attitudes Toward Gun Control," *Political Behavior* 20:3: 241-262.
- 43 James G. Gimpel. 1998. "Packing Heat at the Polls: Gun Ownership as a Politically Salient Trait in State and National Elections," *Social Science Quarterly* 79:3: 634-648.
- 44 James G. Gimpel and Robin M. Wolpert. 1997. "Information, Recall and Accountability: The Electorate's Response to the Clarence Thomas Nomination," *Legislative Studies Quarterly* 22:4: 515-525.
- 45 Kathryn M. Doherty and James G. Gimpel. 1997. "Candidate Character vs. the Economy in the 1992 Election," *Political Behavior* 19:3: 213-222.
- 46 James G. Gimpel and Diane Hollern Harvey. 1997. "Forecasts and Preferences in the 1992 Presidential Election," *Political Behavior* 19:2: 157-175.
- 47 James G. Gimpel and Robin M. Wolpert. 1996. "Opinion-Holding and Public Attitudes Toward Controversial Supreme Court Nominees." *Political Research Quarterly* 49: 1: 163-176.
- 48 James G. Gimpel and Robin M. Wolpert. 1995. "Rationalizing Support and Opposition to Supreme Court Nominations: The Role of Credentials." *Polity* 28: 1: 67-82.
- 49 James G. Gimpel and Lewis S. Ringle. 1995. "Understanding Court Nominee Evaluation and Approval: Mass Opinion in the Bork and Thomas Cases." *Political Behavior* 17: 1: 135-153.
- 50 Paul S. Herrnson and James G. Gimpel. 1995. "District Conditions and Primary Divisiveness in Congressional Elections." *Political Research Quarterly* 48: 1: 117-134.
- 51 James G. Gimpel. 1993. "Reform-Resistant and Reform-Adopting Machines: The Electoral Foundations of Urban Politics 1910-1930," *Political Research Quarterly* 46: 2: 371-382.

Chapters in Edited Books:

- 1 James G. Gimpel. 2018. "Sampling for Studying Context: Traditional Surveys and New Directions." in R. Michael Alvarez and Lonna Atkeson, eds. *Oxford Handbook of Polling and Polling Methods*. (New York, NY: Oxford University Press).
- 2 James G. Gimpel. 2013. "State Politics and Political Culture." in Joshua J. Dyck and Richard G. Niemi, eds. *Guide to State Politics and Policy*. (Washington, DC: CQ Press)

Chapters in Edited Books (cont'd):

- 3 James G. Gimpel and Shanna Pearson-Merkowitz. 2009. "Political Socialization and Religion." in Corwin Smidt, ed. *Oxford Handbook of Religion and Politics* (New York: Oxford University Press).
- 4 James G. Gimpel and Shanna Pearson-Merkowitz. 2009. "Policies for Civic Engagement Beyond the Schoolyard." in Peter Levine and James Youniss, eds. *Engaging Young People in Civic Life*. (Nashville, TN: Vanderbilt University Press).
- 5 James G. Gimpel and Kimberly A. Karnes. 2007. "The Rural-Urban Gap in American Electoral Politics." in Laura Olson and John C. Green, eds. *Beyond Red State, Blue State: Voting Gaps in American Politics* (Upper Saddle River, NJ: Prentice Hall).
- 6 James G. Gimpel and Frances E. Lee. 2006. "The Geography of Electioneering: Campaigning for Votes and Campaigning for Money." in John Samples and Michael McDonald, eds. *The Marketplace of Democracy: Electoral Competition and American Politics* (Washington, DC: Brookings Institution Press).
- 7 James G. Gimpel and J. Celeste Lay. 2005. "Political Environments and the Acquisition of Partisanship." in Alan Zuckerman, ed. *The Social Logic of Politics* (Philadelphia, PA: Temple University Press).
- 8 James G. Gimpel and Joshua J. Dyck. 2004. "The Politics of Election Reform in Maryland." in Daniel Palazzolo and James W. Ceasar, eds. *Election Reform: Politics and Policy* (Lanham, MD: Lexington Books).
- 9 James G. Gimpel and Robin M. Wolpert. 1998. "The Structure of Public Support for Gun Control: The 1988 Battle Over Question 3 in Maryland," in John Bruce and Clyde Wilcox (eds.) *The Changing Politics of Gun Control* (Lanham, MD: Rowman & Littlefield).
- 10 James G. Gimpel. 1998. "Equilibrium Cycles in Grassroots Mobilization and Access," in Paul S. Herrnson, Ronald Shaiko and Clyde Wilcox (eds.) *The Interest Group Connection* (Chatham, NJ: Chatham House).
- 11 James G. Gimpel. 1994. "The Rise and Demise of a Lead PAC," in Robert Biersack, Paul S. Herrnson and Clyde Wilcox (eds.) *Risky Business: PAC Decisionmaking and Strategy in 1992*. (Armonk, NY: M.E. Sharpe). 56-62.
- 12 James G. Gimpel. 1993. "Congress and the Coordination of Public Assistance," in Edward T. Jennings and Neal Zank (eds.) *Welfare System Reform*. (Westport, CT: Greenwood Press). 33-42.

Grants and Awards:

- ▶ Hoover Institution, National Fellowship 2012-2013.
- ▶ Knight Foundation Grant, 2007-2011, \$60,000 (by contract via D. Chinni).
- ▶ CIRCLE via The Pew Charitable Trusts, 2004-2005, \$35,000.
- ▶ CIRCLE via The Pew Charitable Trusts, 2002-2003, \$33,000.
- ▶ Ahmanson Community Trust Foundation, 2001-2003, \$100,000.
- ▶ William T. Grant Foundation Research Grant, 2001-2003, \$102,000.
- ▶ John M. Olin Foundation Policy Studies Grant, 1998, \$30,000.
- ▶ Visiting Fellow, Congress Assessment Project, Washington, DC, 1995, \$7,000.
- ▶ Summer Research Award, Graduate Research Board, University of Maryland, 1995, \$4,500.
- ▶ University of Chicago Graduate Fellowship, 1986-1990.

Magazine Articles, Opinion Editorials, Book Reviews:

- James G. Gimpel. 2015. "Where are the Working Class Republicans and Is There Something the Matter with Them?" *Extensions: A Journal of the Carl Albert Congressional Research and Studies Center* (Winter): 6-11.
- Dante Chinni and James G. Gimpel. 2011. "The 12 States of America." *The Atlantic Monthly*. 307: 3 (April): 70-81.
- Wendy K. Cho and James G. Gimpel. 2009. "Presidential Voting and the Local Variability of Economic Hardship." *The Forum*. 7: 1: 1-24.
- Wendy K. Cho and James G. Gimpel. 2008. "A Political Powerhouse in Search of a Home." with Wendy K. Cho. *Asian American Policy Review*. 17: 155-161.
- James G. Gimpel. 2007. "Etats-Unis Election Présidentielle: Le Dessous des Cartes," *Alternatives Internationales*. December. 10-14.
- Wendy K. Cho and James G. Gimpel. "Pay Attention to Asian American Voters." *Politico*. May 28, 2007 Opinion-Editorial posted on-line at <http://www.politico.com/news/stories/0507/4213.html>
- James G. Gimpel and Kimberly A. Karnes. 2006. "The Rural Side of the Urban-Rural Gap." *P.S.: Political Science & Politics* 39: 3: 467-472.
- James G. Gimpel "The Federalism Flip-Flop: Democrats Now Argue for States' Rights." Opinion Editorial in the *Boston Globe*. Sunday, December 19, 2004, Political Play.
- Wendy K. Cho and James G. Gimpel. 2004. "Getting out the Asian-Pacific American Vote." *Campaigns & Elections*. (July): 44-45.
- James G. Gimpel. 2003. "Computer Technology and Getting Out the Vote: New Targeting Tools." *Campaigns & Elections* (August): 39-40.
- James G. Gimpel. 2003. Review of Donald Green, Bradley Palmquist and Eric Schickler. *Partisan Hearts and Minds: Political Parties and the Social Identities of Voters*. In *APSR's Perspectives on Politics*. (September):606-607.
- James G. Gimpel and Jason E. Schuknecht. 2001. "Setting Different Courses: Along the Potomac, A Political and Philosophical Divide," Opinion Editorial in *The Washington Post*. Sunday, January 21, Outlook Section.
- James G. Gimpel and Jason E. Schuknecht. 2000. "We Shall Finally Overcome, By Exposure," Opinion Editorial in *The Baltimore Sun* Wednesday, September 6. p. 17A.
- James G. Gimpel. 2000. Review of George Borjas' *Heaven's Door: Immigration Policy and the American Economy*. In *Political Science Quarterly* 115: 1: (Spring): 145-146.
- James G. Gimpel. 1998. "Maryland's Topsy-Turvy Politics: A Step Up for a Party Coming Back to Life," Opinion Editorial in *The Washington Post*. Sunday, October 17. Outlook Section.
- James G. Gimpel. 1997-98. Review of John Bader's *Taking the Initiative*. In *Political Science Quarterly* 112:4: 692-693.
- James G. Gimpel. 1996. Review of Philip Klinkner's *The Losing Parties*. In *Journal of Politics* 58: 245-246.
- James G. Gimpel. 1992. Review of Ralph Goldman's *The National Party Chairmen and Committees*. In *American Political Science Review* 86: 237-238.
- James G. Gimpel. 1991. Review of Mark Bisnow's *In the Shadow of the Dome*. In *American Political Science Review* 85: 630-631.

Magazine Articles, Opinion Editorials, Book Reviews (cont'd):

- James G. Gimpel. 1991. "Congressional Oversight of Welfare and Work." *Public Welfare* 49: 8-11.

Research in Progress or Under Review:

- James G. Gimpel. 2019. "Voicing Grievances to the Consumer Financial Protection Bureau." Submitted for review.
- James G. Gimpel and Laurel Harbridge-Yong. 2019. "Does Competitive Redistricting Reckon with Communities of Interest?" Submitted for review.
- James G. Gimpel, Nathan Lovin, Bryant Moy and Andrew Reeves. 2019. "The Emergent Urban-Rural Gulf in American Political Behavior." Submitted for review.

Conference Participation (recent):

- James G. Gimpel and Nathan Lovin. 2019. "The Rise of the Urban South and the Evolution of Two-Party Politics, 1940-1998" Paper presented at the Annual Meeting of the Midwest Political Science Association, April 4-7, Chicago, IL.
- James G. Gimpel and Laurel Harbridge-Yong. 2019. "Does Competitive Redistricting Reckon with Communities of Interest?" Paper presented at the SPARK Big-10 Conference on Redistricting, March 4-5, College Park, Maryland.
- James G. Gimpel, Nathan Lovin, Bryant Moy and Andrew Reeves. 2018. "The Emergent Urban-Rural Gulf in American Political Behavior." Paper presented at the Annual Meeting of the Midwest Political Science Association, April 7-9, Chicago, IL.
- James G. Gimpel and Nathan Lovin. 2016. "The Variable Development of Partisanship within the South, 1940-1966." Paper presented at the annual meeting of the American Political Science Association, September 1-4, Philadelphia, PA.
- Kristina Miler, Charles R. Hunt and James G. Gimpel. 2016. "Recruiting the Best Candidate for the Job: Candidate Dyads and Congressional Election Outcomes." Paper presented at the annual meeting of the Midwest Political Science Association, April 8-10, Chicago, IL.
- James G. Gimpel and James Glenn. 2016. "Racial Context as a Stimulus to Campaign Contributing." Paper presented at the annual meeting of the Midwest Political Science Association, April 8-10, Chicago, IL.
- Caroline Carlson, Wendy K. Cho and James G. Gimpel. 2014. "Political Implications of Residential Mobility and Stasis on the Partisan Balance of Locales." Paper presented at the annual meeting of the American Political Science Association, August 28-September 1, Washington, DC.
- James G. Gimpel and Iris Hui. 2013. "Political Evaluations of Neighborhoods and their Desirability: Experimental Evidence." Paper presented at the annual meeting of the American Political Science Association, August 30-September 1. Chicago, IL.
- James G. Gimpel, Frances E. Lee and Michael Parrott. 2012. "Business Interests and the Party Coalitions: Industry Sector Contributions to U.S. Congressional Campaigns," Paper presented at the annual meeting of the Midwest Political Science Association, April 12-15. Chicago, IL.
- Brittany Bramlett and James G. Gimpel. 2011. "Local Age Distributions and Ideological Extremism in American Politics," Paper presented at the annual meeting of the American Political Science Association, September 1-4. Seattle, WA.
- Wendy K. Cho, James G. Gimpel and Daron R. Shaw. 2011. "The Geography of Tea: Strategic Activism or Expressive Protest?" Paper presented at the annual meeting of the Midwest Political Science Association, March 30-April 3. Chicago, IL.
- James G. Gimpel, Frances E. Lee and Rebecca U. Thorpe. 2010. "The Distributive Politics of the Federal Stimulus: The Geography of the ARRA of 2009," Paper presented at the annual meeting of the American Political Science Association, September 1-4. Washington, DC.

Conference Participation (recent) cont'd:

- James G. Gimpel and Iris Hui. 2010. "Migration Decisions and Destinations: Evidence for Political Sorting and Mixing," Paper presented at the annual meeting of the Midwest Political Science Association, April 22-22, 2010. Chicago, IL.

Ph.D. Dissertation:

- Field: American Government. Subfield: Political Behavior
- Title: "Competition Without Cohesion: Studies in the Electoral Differentiation of State and National Party Systems."

Committee: Mark Hansen, Henry E. Brady, Gary Orfield, and J. David Greenstone (deceased)

Teaching:

- Courses: Campaigns and Elections; American Voting Behavior; Immigrants and Immigration Policy; State Politics; U.S. Congress; Public Opinion; Statistics; Linear Models; GIS for Social Science Research; Intermediate GIS for Social Science Research; Spatial Statistics.
- Awards: University Excellence in Mentorship and Teaching Award, 1999.
Panhellenic Association Outstanding Teacher Award, 1994.

Ph.D. Students and Placements

Charles Hunt, member (tt Boise State University 2019)
 Michael Parrott, member (APSA Congressional Fellow, 2016; Columbia University non tt 2019)
 Stephen Yoder, chair (Government Accountability Office, 2014)
 Heather Creek, chair (Pew Research Center, 2013)
 Daniel Biggers, member (Yale Post-Doc 2012; moved to tt UC-Riverside, 2014)
 Brittany Bramlett, chair (tt Albright College, 2012, moved to non tt Georgia 2014)
 Rebecca Thorpe, member (tt University of Washington, 2010 tenured)
 Kimberly Karnes, chair (tt Old Dominion, 2010)
 Shanna Pearson-Merkowitz, member (tt University of Rhode Island, 2009, tenured)
 Laurence O'Rourke, chair (ICF Research 2008)
 Joshua Dyck, chair (tt University of Buffalo, 2006 tenured, moved to UM, Lowell, tenured)
 Laura Hussey, chair (tt University of Maryland, Baltimore County, 2006 tenured)
 Richard Longoria, chair (tt Cameron University, 2006, moved to Texas A&M Brownsville 2014)
 Adam Hoffman, member (tt Salisbury University, 2005, tenured)
 Regina Gray, member (Department of Housing and Urban Development, 2005)
 J. Celeste Lay, chair (tt Tulane University, 2004, tenured)
 Atiya Stokes, member (tt Florida State University, 2004, moved to Bucknell, tenured)
 Thomas Ellington, member (tt Wesleyan College, 2004, tenured)
 Timothy Meinke, member (tt Lynchburg College, 2002, tenured)
 Jason Schuknecht, chair (Westat research consulting, 2001)
 Constance Hill, member (Birmingham Southern College, 2000)
 Peter Francia, member (tt East Carolina University, 2000, tenured)
 Peter Burns, member (tt Loyola University, New Orleans 1999, tenured)
 David Cantor, member (Lake, Snell, Perry research consulting, 1999)
 Richard Conley, member (tt University of Florida, 1998, tenured)
 Susan Baer, member (tt San Diego State, 1998)
and six others prior to 1998.

Advanced Training:

- Statistical Horizons Workshop on Big Data and Data Mining. University of Pennsylvania Wharton Business School, Philadelphia, PA, April 2013.
- Summer Workshop on Frontiers of Spatial Regression Analysis. Spatial Analysis Laboratory, University of Illinois, Urbana-Champaign, June 2007.
- Summer Workshop on Point Pattern Analysis, Department of Geography, University of California, Santa Barbara, June 2004.
- Summer Workshop on Distance and Accessibility, Department of Geography, Ohio State University, July 2002.
- Summer Statistics Program, ICPSR, University of Michigan, Ann Arbor, Michigan, June 1994.

Service to the Discipline:

- Journal Editor, *American Politics Research*, 2003-2011. During this time, submissions doubled from ~110 per year to over 220 per year; journal submission and operations moved on-line; journal content expanded by 30%; and review times dropped to a mean of 45 total days (sd=17 days).
- Elections and Voting Section Committee to Name Emerging Scholar in American Politics, 2003 and 2007.
- Chair, APSA William Anderson Award Committee to Name the Best Ph.D. Dissertation in State and Local Politics, Federalism and Intergovernmental Relations, 2010.
- Manuscript Reviewer: *American Political Science Review*; *American Journal of Political Science*; *Journal of Politics*; *Political Geography*; *Political Research Quarterly*; *Public Opinion Quarterly*; *Political Psychology*; *American Politics Research*; *Political Behavior*; *Urban Affairs Quarterly*; *Social Forces*; Cambridge University Press, Brookings Institution Press, Johns Hopkins University Press; St. Martin's Press; HarperCollins Publishing; Pearson-Longman Publishing; Greenwood Press; University of Pittsburgh Press; SUNY Press; University of Michigan Press
- PRQ Outstanding Reviewer Award, 2009-2010

Departmental Committee Service:

- 2003-2010 Promotion and Tenure Committees (Karen Kaufmann, Frances E. Lee (twice), Geoffrey Layman, Linda Faye Williams and Irwin Morris)
- 2001-2009 Faculty Supervisor, Maryland State Government Internship Program.
- 2003-2004, 2001-2002; 1998-1999 Faculty Search Committees
- Service includes: Executive Committee; Undergraduate Studies Committee; Graduate Studies Committee; Salary Committee; Conley-Dillon Award Committee; Promotion & Tenure Working Group.

University and College Service:

2015-2017 Advisor to UMD BSOS Dean on College Fundraising and Development
 2015-2017 Advisor to UMD Office of Government Relations
 2015-2017 Advisor to UMD Office of Institutional Research, Planning and Assessment
 2014-2016 Advisor to University Relations Office of Prospect Management and Research
 2011-2012 Dean's Committee on GIS and Spatial Analysis in the Social Sciences
 2007-2008 Joint Asian American Studies/Public Policy Faculty Search Committee.
 2005-2007 Department Representative on UM Faculty Senate
 2004-2006 Department Representative on College Promotion and Tenure Committee.
 2000-2005 Chair, Behavioral and Social Sciences Curriculum Committee
 1999-2001 Behavioral and Social Sciences Academic Council
 1997-2000 Faculty Senate Campus Parking Advisory Committee

Research Consulting and Government Work Experience (selected):

- *Head Start XXI Resource Center, Hammond, Indiana.* GIS and Statistical Consultant to this Head Start Program Serving 1,200 clients in Lake and Porter Counties. October 2003-March 2004.
- *Naugatuck Valley Economic Development Commission.* Adviser to this Connecticut economic development agency drafting an EDA report on the local economic impact of defense downsizing and industrial restructuring in the Northeast. January 1998-May 1998.
- *U.S. Department of Housing and Urban Development.* Office of Policy Development and Research. Policy analyst working in the economics division under Assistant Secretary for Policy Development and Research, John Weicher. June 1991-January 1992.

Official Expert Testimony (selected):

- *Whitford v. Gill; July 2019*
- *Baber v. Dunlap; December 2018.*
- *League of Women Voters v. Commonwealth of Pennsylvania; December 2017.*
- *Agre et al. v. Wolf et al.; December 2017.*
- *Common Cause v. Rucho; and League of Women Voters v. Rucho; consolidated cases; April 2017.*
- *Juan Juaregui vs. City of Palmdale, California; May 2013.*
- U.S. House of Representatives, Government Reform Subcommittee on Federalism and the Census, Testimony on Immigration-Induced Reapportionment, December 6, 2005.
- U.S. House of Representatives, Small Business Committee, Testimony on Population Mobility and the Rural Economy, May 20, 1997.
- Maryland Commission to Revise the Election Code, Testimony on Third-Party Voting and Registration, November 1996.

Invited Talks and Speaking Engagements (recent):

- Invited Guest, Niskanen Center, Washington, DC. "The Urban-Rural Divide in American Politics." May 14, 2019.
- Invited Guest, Parkdale High School, Riverdale Park, Maryland; AP Government Lecture on Campaigns and Elections. November 30, 2017.

Invited Talks and Speaking Engagements (recent):

- Invited Panelist, American Enterprise Institute, Washington, DC. "Opinion Diversity in the Academy." May 11, 2017.
- Presentation at Washington University, St. Louis. Department of Political Science. "Incidental and Intentional Partisan Residential Sorting." December 1, 2016.
- Presentation at The Maret School, Washington, DC. "Our Patchwork Nation and the 2016 Election." November 9, 2016.
- Presentation at Bowdoin College, Brunswick, ME. "Big Data and the Political Campaign." February 16, 2016.
- Presentation at American University, National Capital Area Political Science Association Workshop. "Business Interests and the Party Coalitions: Industry Sector Contributions to U.S. Congressional Campaigns." January 7, 2013.
- Conference Participant at Hoover Institution, Legal Immigration Policy Roundtable. Stanford University. Palo Alto, California. October 4-5, 2012.
- Presentation at the University of Maryland Libraries, Speaking of Books Series. "Our Patchwork Nation." College Park, Maryland. October 19, 2011.
- Presentation at University of Iowa, Department of Political Science. "Voter Migration and the Geographic Sorting of the American Electorate." Iowa City, IA. September 30, 2011.
- Keynote Address delivered to the Annual Great Plains Political Science Association Convention. "Economic and Political Socialization: Lessons from Rural America for the Rest of the Nation." Brookings, SD. September 24, 2011.
- Presentation at Stanford University, Hoover Institution. "The Geography of Tea: Strategic Activism or Expressive Protest?" May 19, 2011.
- Presentation at the University of California, Los Angeles, Department of Geography. "New Directions in the Geographic Analysis of Contemporary U.S. Politics." April 22, 2011.
- Presentation at the University of Maryland, School of Public Policy. Tuesday Forum. "Economic and Political Socialization across *Our Patchwork Nation*." November 30, 2010.
- Presentation at University of Kentucky, Department of Political Science. "Voter Migration and the Geographic Sorting of the American Electorate." Lexington, KY. December 3, 2010.
- Presentation at Georgetown University, American Politics Workshop. "The Distributive Politics of the Federal Stimulus." Washington, DC. September 24, 2010.
- Presentation at Christopher Newport University, Conference on Civic Education and the Future of American Citizenship. "Political Socialization Inside and Outside the Classroom." Newport News, VA. February 4, 2010.
- Presentation at the Brookings Institution. "Remarks on Joint Brookings/Kenan Center Immigration Roundtable Proposals and Recommendations." Washington, DC. October 6, 2009.
- Presentation at the University at Buffalo, Department of Political Science Seminar Series. "Regional Migration Flows and Partisan Sorting of the American Electorate." Buffalo, NY. April 17, 2009.

Invited Talks and Speaking Engagements (recent):

- Presentation at the University of Wisconsin, Madison, American Politics Workshop. "Rough Terrain: Spatial Variation in Political Participation." Madison, WI. March 23, 2009.
- Presentation at the University of Texas, Austin, Department of Government. "Immigration and Diversity Attitudes in Rural America." Austin, TX. February 26-27, 2009.
- Presentation at the University of Paris 8, St. Denis. "Political Socialization and Diversity Attitudes." Conference on Immigration and Spatial Concentration in Three Countries. Paris, France. January 15-16, 2009.

EXHIBIT 2

Expert Report of**James G. Gimpel, Ph.D.**

I am a Professor of Political Science in the Department of Government at the University of Maryland, College Park. I received a Ph.D. in political science at the University of Chicago in 1990. My areas of specialization include political behavior, voting, political geography, geographic information systems (GIS), and population mobility. Publications include papers in well-regarded peer reviewed political science journals (*AJPS*, *APSR*, *JoP*, *QJPS*), journals in other social science fields, as well as several books relating to the same subjects. I was retained at the rate of \$300 per hour plus costs. My opinions expressed in this case are in no way contingent on the payment of any monies owed to me for my services. My opinions in this report are given within a reasonable degree of professional certainty.

Focus of Research and Overview

On July 15, I was asked by the defendants in this case to evaluate the plaintiffs' claims and respond to expert reports presented by the plaintiffs, on Waller County election officials' siting of early voting locations and allocation of early voting hours for the 2018 election. I begin by reviewing the research on the relevance of polling place siting to turnout. Though moving polling places can sometimes produce a small increase in voter turnout, the proximity of a precinct site is of much less importance than the motivation and interest level of voters and the stimulus offered by competitive campaigns. Over the course of recent presidential and mid-term elections there is little evidence in Waller County that those living closer to either an Election Day or early voting site vote at appreciably higher rates than those living at a greater distance. Waller County polling places are sited with voter populations and demand in mind, and early voting sites are considered a service to overcome miscellaneous inconveniences voters may experience, distance from the Election Day site being the

primary one. The County has been remarkably even handed in the placement of early voting sites across the county from the earliest election in 2002, when the county first expanded early voting to more than two sites, to the most recent election when it placed early voting sites at eight locations. Certainly compared to similarly sized Texas counties with similarly sized college campuses, Waller County has been exceedingly generous in providing polling places at locations proximate to the Prairie View A&M community. Almost no other comparably sized counties have opened up even an Election Day polling place on the campuses in their midst, much less offered an early voting place on or immediately adjacent to these campuses. Finally, location allocation models generated in a Geographic Information System designed to maximize the proximity of *all* Waller County voters to the opening of eight, nine or even *ten* early voting sites would not suggest the placement of two sites in the Prairie View area, as was the county's practice in 2016 and 2018. Only one site is due Prairie View based on a strict accounting of equal voter access and given a limitation of eight site placements out of 20 possible locations. The fact that the Prairie View area was provided *three* early voting sites in 2018, offering 65 total hours of voting, in addition to the customary Election Day sites, suggests just how responsive the Waller County Commissioners Court has been to this population.

Turnout: Motivation and Convenience

Waller County exhibits familiar patterns of turnout that can be observed in many studies of political behavior over the course of recent decades (see Figure 1). The zig-zag or jagged pattern of high turnout in presidential election years and drop-off in the off years is commonly described as "surge-and-decline" (Campbell 1960). In presidential election years, the high stimulus of a national election motivates more voters to go to the polls to cast ballots. Off-year elections, on the other hand, are usually not as highly visible and some offices are not highly competitive between the two major parties. Motivation to vote drops, sometimes considerably, depending on the location and the election year in

question. How much drop-off there is commonly hinges on the closeness of election contests at the state level. In 2018, turnout across Texas was extraordinarily high due to the interest in the competitive U.S. Senate race between incumbent Ted Cruz (R) and challenger Beto O'Rourke (D). In Waller County, Figure 1 shows that the drop in turnout was less than 4 points from the 2016 presidential election. In recent elections, however, it is not unusual to see a 24-point drop in turnout from presidential to off-years.

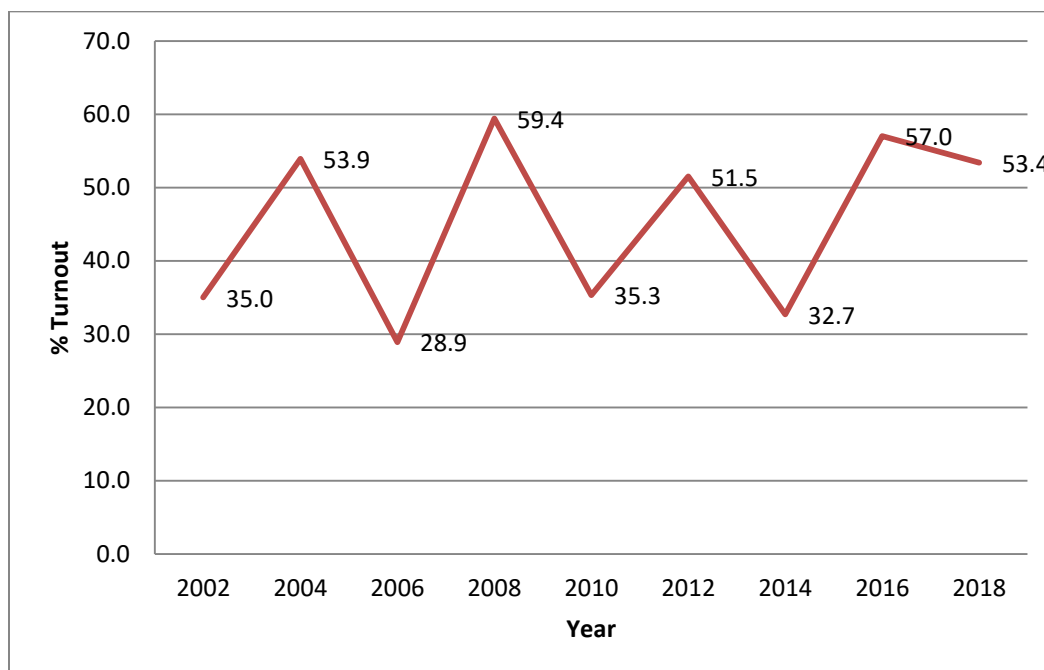


Figure 1. Turnout Surge-and-Dcline in Waller County General Elections, 2002-2018. Source: Texas Legislative Council, Precinct Election Results File, <https://tlc.texas.gov/redist/data/data.html>, accessed August 23, 2019.

The surge-and-decline fluctuation in turnout extends down into Waller County's communities, precincts and neighborhoods. Figure 2 shows the turnout differences since 2002 for four precincts where the boundaries have remained substantially the same over the period. Two of these precincts, 309 and 310, cover the Prairie View area of the county, and two others, 101 is in and around the town of Hempstead, and 208 encompasses the town of Waller and extends northward. The very same trends are apparent across all four locations, though Precinct 309 stands out for having lower overall turnout

than the other three, with turnout diving to single-digit lows in 2014. This is the precinct that contains the Prairie View A&M campus. In presidential election years, turnout in 309 can surge to above 40 percent, though it still lags well behind the participation levels of the other precincts. In the off year contests, however, the drop-off in 309 has exceeded 30 points, a much greater decline than found in the other precincts, or in the county overall (Figure 1). Given that typical pattern it is quite noteworthy that in 2018 turnout in 309 actually moved above the level reached in 2016, exceeding it by 7 points. This uptick is not visible in the other three precincts though they all had much higher turnout in both 2016 and 2018 than found in 309. Notably, however, the turnout jump in 2018 is something of a reflection of the very low interest expressed in voting in 2016 – turnout sagged to just 30 percent, well below 2008 and 2012. That very low bar made it less difficult to improve, though the turnout increase from 2016 to 2018 is still remarkable.

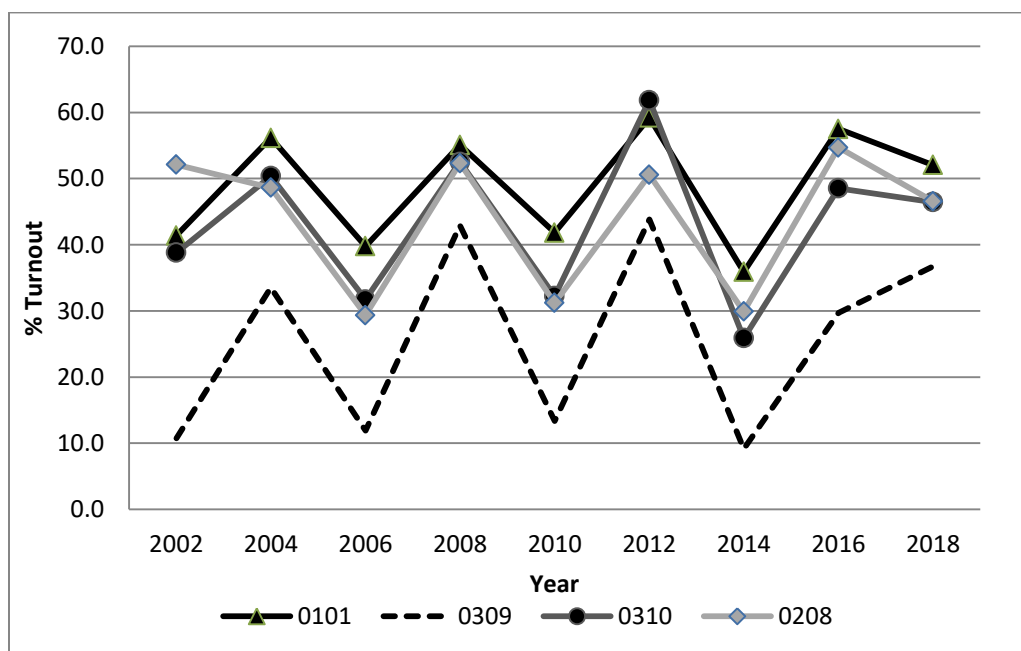


Figure 2. Turnout Surge-and-Divide in Specific Waller County Precincts, 2002-2018. Source: Texas Legislative Council, Precinct Election Results File, <https://tlc.texas.gov/redist/data/data.html>, accessed August 23, 2019.

The rise-and-fall in turnout in Waller County and its individual precincts (Figures 1 and 2) is visible across many parts of Texas and indeed the entire United States. How much of the variability in turnout in Waller County can be attributed to the availability and placement of polling sites in general, and of early voting sites in particular? The answer is: not much. This is evident by consideration of the plain fact that the county has used almost the same polling places throughout this entire period (since 2002), even as turnout has moved up and down precipitously, countywide and in the Prairie View precincts 309 and 310. The locations of the Prairie View area polling sites have occasionally been changed since 2002, but not by moving them great distances. Moreover, the county has maintained a commitment to the early voting option for Prairie View area residents throughout the years traversed by the data in Figure 2. Not only has early voting been made available as an option, the polling places for early voting have changed very little by location over the past several elections, even as turnout has fluctuated in the volatile ways pictured in Figure 2. And when early voting locations have been changed, the movement has involved a relocation covering a mile or less. The interest of Waller County voters in participating at high rates in one election but not the next simply cannot be attributed to the addition or subtraction of either regular Election Day polling places, or the placement of early voting sites in the county.

To be sure, there is truth in the claim that research from various locations has found that the placement and movement of precinct polling places can have a marginal impact on turnout levels. Typical differences in overall participation rates made by precinct relocation can be in the low single digits: 2 to 4 percent perhaps (Haspel and Knotts 2005; Stein and Vonnahme 2008; Brady and McNulty 2011). The differences are modest because precincts as geographic units are usually pretty small and there isn't much room to improve placement since the original sites, wherever they may have been placed at the start, still had to be located somewhat proximate to the voters they serve. This is why relocation to a "more central" location produces only a small gain. The precincts in Waller County, as in

most other locations, are compact in geographic area. The largest one covers 61 square miles (Precinct 206), and the smallest (Precinct 419) only about 1 square mile. Prairie View A&M's Precinct 309 is slightly under three square miles in total area. That doesn't leave a lot of room to improve on precinct placement.

A superior explanation for the variation in turnout seen in Figures 1 and 2 goes to the motivation of underlying populations given changes in the competitiveness of elections they experience from cycle-to-cycle. The competitiveness of elections has a direct bearing on the amount of information circulating about political candidacies and events, and is also a stimulus to mobilization efforts by campaigns and their aligned activists. A mounting body of research has shown that more vigorous campaign outreach efforts can make a substantially large impact on turnout, depending largely on mode, frequency and timing of voter contact (Green and Gerber 2019). Turnout gains of 5, 7 and even 12 percent are not unheard of because the penalty for being a low information voter is far more punitive on turnout than the penalty associated with living a half mile further away from a polling place.

Convenience voting is increasingly thought to benefit voters who would have voted on Election Day in the first place, not those who would not have voted at all (Berinsky 2006; Giammo and Brox 2010). Related research has found that it is high propensity voting groups who are more likely to avail themselves of early voting (Ashok et al. 2016). One recent paper even suggests that early voting has reduced overall turnout by eliminating the incentive for parties and campaigns to mobilize voters (Burden et al. 2014). That does not give anyone a license to place polling locations in obscure and out-of-the-way locations, but it should temper expectations about the effects of moving a polling place around the block or adding a new one down the street. There is simply no evidence to suggest that 20-point gap in participation between Precinct 309 and other precincts shown in Figure 2 will be meaningfully affected by moving an early voting site a distance of four blocks from the edge of the Prairie View A&M campus to the center. Motivation and interest are much larger barriers to voter

turnout than inconvenience. The myriad reasons for low youth voter turnout include the absence of an established habit of voting (Plutzer 2002), the tendency for young adults to change addresses frequently forcing them to re-register (Squire, Wolfinger and Glass 1987), the failure to experience politically competitive campaigns during formative periods of the lifecycle (Pacheco 2008), and poor socialization resulting from family background and parental resources (Brady, Schlozman and Verba 2015). None of these factors can be satisfactorily addressed by changes in the locations of polling places.

In fact, there is abundant evidence in Waller County and in other parts of the country that many people can live directly down the street, well within one-quarter mile of a polling place, and still not vote in high stimulus general elections. One-quarter mile is the same distance as 4.4 football field lengths. At a pace of three miles per hour, an adult can walk one-quarter of a mile in ten minutes. A mile is said to be equivalent to about 16 blocks in the city of Houston; one-quarter mile is, by this standard, about four Houston city blocks. Of the 2,806 Waller County voters whose geocoded residential addresses placed them within 1,320 feet of a polling place in 2018, total turnout among that group reached only 29.0 percent, considerably lower than for the county as a whole (44.5%) (see Table 1). The other 71 percent living within that distance did not choose to vote in spite of being so proximate. The relevant data appear in Table 1 as a crosstabulation.¹ If people can live within walking distance of a polling place and still not vote in a hotly contested election, there is little basis to conclude that polling place movement would significantly affect the voter participation shown in Figures 1 and 2.

¹ This table and subsequent tables from the 2018 voter file is based on the geocoded voters in the Waller County voter file supplied by plaintiffs' expert, Professor Robert Stein. Results are based on the longitude and latitude coordinates supplied in this file.

Table 1. Turnout in November 2018 by Those Living Inside and Outside 1/4 Mile Distance to Polling Place			
	Quarter Mile		Total
	Outside	Inside	
Did Not Vote	15455	1991	17446
	54.0%	71.0%	55.5%
Voted	13184	815	13999
	46.0%	29.0%	44.5%
Total	28639	2806	31445
	100.0%	100.0%	100.0%
Percentages tabulated down the columns Source: Waller County Voter file, and author's calculations			

Table 2. Turnout in 2018 by Those Living Inside and Outside 1/2 and One Mile Distance to Polling Place							
	Half Mile				One Mile		
	Outside	Inside	Total		Outside	Inside	Total
Did Not Vote	12301	5145	17446		8343	9103	17446
	51.2%	69.2%	55.5%		49.2%	62.8%	55.5%
Voted	11712	2287	13999		8608	5391	13999
	48.8%	30.8%	44.5%		50.8%	37.2%	44.5%
Total	24013	7432	31445		16951	14494	31445
	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%
Percentages tabulated down the columns							
Source: Waller County Voter file, and author's calculations							

Table 2, above, shows the distribution of Waller County voters and non-voters who live within one-half mile and one mile of an Election Day polling place in 2018. Those residing closer to these sites, eight of which were also used as early voting sites, did not have higher turnout levels in the 2018 election. In fact, Table 2 shows that overall turnout was considerably higher – more than 18 percentage points higher – for those *living beyond a half mile* from a precinct polling place, and almost 14 points higher for those living beyond a mile of a precinct voting location.

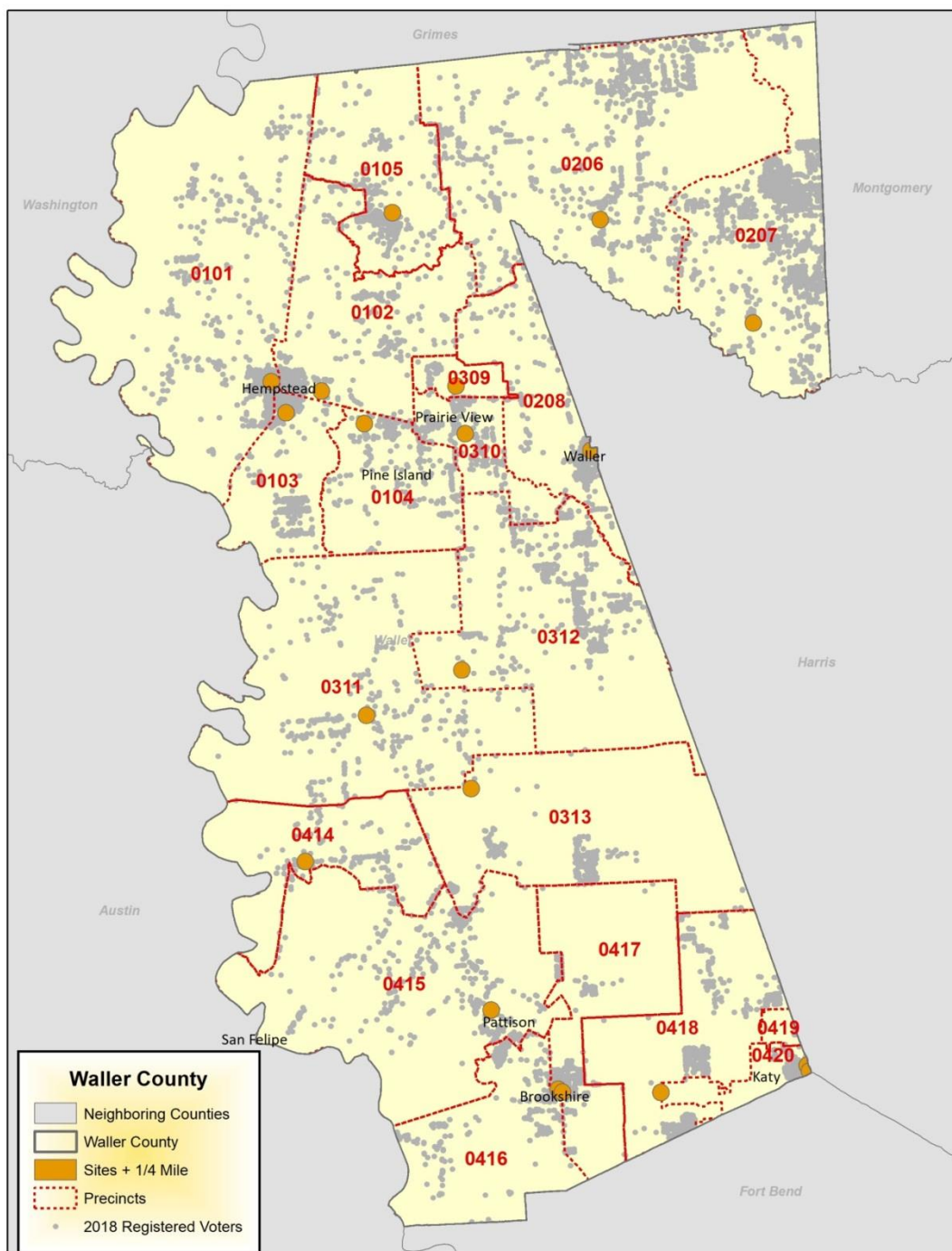
Proximity to Polling Places and Total Turnout in 2016 and 2018

A more comprehensive look at the election returns from Waller County from the 2016 and 2018 general elections cast grave doubts on how much the convenience of being close to a polling site matters to turnout. Table 3 shows the figures for overall turnout in 2018 for voters who live within one-quarter mile (1,320 feet), one-half mile (2,640 feet) and within one mile (5,280 feet) of the Election Day polling place for each precinct in the county.² The table also contains the overall turnout percentages for those who live outside these distances but whose residential addresses lie within the county. In most precincts, turnout rates in 2018 were not higher for those living within a quarter or half-mile of a polling place than they were for those living at greater distances. Using one mile of distance as the proximity standard, the difference in turnout rates between voters close-in and further away diminish somewhat, though in 13 of 20 precincts those living beyond a mile still voted at a higher rate than those living closer (Table 3).

To understand the county's election administration decisions, studying the geographic distribution of voters is an essential place to begin. Map 1 provides a helpful illustration of the locations of recent (2018) precinct sites against a background of the distribution of registered voters from the 2018 general election voter file. Historically, the county's population concentrations have been in several small towns: Hempstead, Brookshire, Waller and Prairie View, with Katy spilling over from across the Harris County border in the southeast. In more recent years, higher density development has also begun to dot the upper county precincts closest to the Montgomery County border (see Map 1). But outside the older and more established towns, settlement remains sparse. To cover such a widely scattered population, Waller precinct polling sites are not always situated within the county's

²Not every residential address can be precisely geocoded to its exact street location. Addresses that are post office boxes cannot be geocoded. Students at Prairie View A&M who provide the University's 700 University Avenue address for their voter registration are placed within the one mile distance band, but not within the one-quarter or half-mile distance band. They are presumed to live within Precinct 309 and on campus, but not within 2,640 feet of the Tempton Memorial Student Center.

towns, or in more heavily populated neighborhoods. To serve the sparsely settled parts of the county, sometimes



Map 1. Waller County 2018 Precincts and Polling Places with Distribution of Registered Voters

Precinct	Quarter Mile			Half Mile			One Mile		
	Outside 1/4 mile	Inside 1/4 mile	N Voted Inside*	Outside 1/2 mile	Inside 1/2 mile	N Voted Inside*	Outside 1 mile	Inside 1 mile	N Voted Inside*
101	48.0%	39.5%	73	49.9%	40.4%	220	56.6%	39.2%	400
102	40.7%	32.3%	30	42.1%	33.8%	130	52.2%	32.1%	333
103	42.7%	36.2%	67	49.2%	37.4%	319	55.5%	36.6%	361
104	41.7%	24.1%	7	40.9%	41.9%	39	43.7%	36.5%	105
105	55.1%	33.3%	17	57.3%	40.5%	68	59.1%	49.1%	208
206	52.4%	47.8%	22	52.4%	50.0%	65	52.5%	50.9%	143
207	46.9%	40.0%	2	46.9%	51.2%	22	46.8%	51.5%	50
208	41.9%	44.2%	121	44.4%	39.2%	261	51.0%	38.8%	447
309	28.2%	11.1%	132	43.5%	8.3%	195	24.2%	23.2%	938
310	39.9%	33.3%	29	40.8%	35.2%	135	39.2%	39.8%	464
311	52.3%	27.3%	6	51.7%	50.0%	21	51.4%	52.7%	68
312	55.4%	33.3%	10	55.5%	38.5%	20	55.3%	47.1%	33
313	41.4%	33.3%	4	41.3%	40.9%	9	40.8%	48.6%	18
414	51.5%	52.6%	10	51.3%	52.9%	27	48.7%	57.3%	67
415	55.5%	60.0%	15	55.6%	55.3%	47	57.1%	52.0%	198
416	35.9%	49.1%	53	36.9%	36.9%	97	40.4%	32.2%	205
417	37.5%	42.8%	92	38.4%	38.4%	255	38.2%	38.4%	445
418	57.3%	0.0%	0	57.3%	0.0%	0	56.3%	68.2%	135
419	76.1%	0.0%	0	75.8%	100.0%	2	61.0%	81.6%	93
420	60.2%	53.0%	125	61.2%	56.5%	355	66.7%	58.3%	680

Source: Waller County Voter File and author's calculations

*N voted inside column indicates the number of votes cast by residents living within the particular distance buffer. This number will be reflective of the total number of voters within that area. Precincts 207, 311, 313, 418 and 419 had few (if any) registered voters living within 1,320 feet (one-quarter mile) of their polling places. In the case of 419 this is because the polling place is located beyond precinct boundaries.

they lie along rural routes that are several miles away from one of the historic settlements. The polling location commonly used in Precinct 313 is an example. Another example, the site commonly used for Precinct 418 for Katy, is situated away from residential neighborhoods at the Igloo Products Corporation. Precinct 419, moreover, did not contain an Election Day polling place at all in the last two general elections. Voters in that precinct used the Katy VFW location in 2018 for Election Day balloting, the same as the voters living in Precinct 420.

The Election Day polling place for Precinct 309, the Tempton Memorial Student Center at Prairie View A&M, sits beyond 1,320 feet of most of the residential addresses on the campus. Much the same can be said for a frequently used Election Day polling place identified for Precinct 310 – Prairie View City Hall. This location is situated on busy Highway 290. Residential addresses are scattered throughout Precinct 310, but very few voters are found to be living within 1,320 feet of the Prairie View City Hall itself. Because of prevailing low settlement density around these sites and elsewhere in the county, it is not surprising that throughout the entire county there are only about 2,800 voters in 2018 that were geocoded by their residential address coordinates as living within one-quarter mile of a polling site (see Table 1). This is not because there has been some systematic attempt by Waller County election officials to make it difficult for citizens to vote by placing voting sites in remote locations. Suitable polling locations are not found in abundance just anywhere, particularly in less populated areas.

Proximity to the voters living in the precinct is an important criterion for site selection, but it is not the only one. Adequate parking and a smooth flow of traffic in and out of the location is important. Inconvenient parking has been one complaint about community use of the Tempton Memorial Student Center as a polling place. Beyond that there must be space to site voting machines, election judges, and to accommodate waiting voters. Election officials in Texas and elsewhere have a facility checklist that

prospective sites must meet.³ Voters also become accustomed to voting at particular sites, so familiarity with a location is itself a part of the site selection process. Only reluctantly do officials abandon a suitable location that has become familiar to voters.

Except for schools and libraries, properly equipped buildings situated in the middle of residential neighborhoods are often not readily available. Commercial buildings and offices are typically planned and constructed in zones designated for those land uses, commonly on high traffic, high capacity roadways, sometimes in commercially or industrially zoned areas with few residences. From a practical standpoint what this means is that in less densely populated counties, including Waller, going to vote is not simply a walk next door or across the street. Some effort to traverse a modest distance is required by most residents. And in more rural areas, traveling just about anywhere requires effort: going to the supermarket, the post office, the bank branch, to fill the gas tank, or to drop the kids off at school. Going to cast a vote will not be different from other routine trips in that respect.

If the distance radius is extended out to one-half mile, 2,640 feet from a polling place, there are more Waller County voters living within zones of this extent (see Table 2). A half-mile zone is a considerably larger land area than a quarter-mile zone, covering 2.5 square miles, potentially encompassing many more residences. Accordingly, Table 2 shows that in 2018, there were about 7,432 registered voters living within a half mile of an Election Day polling place (about 24% of all registered voters).

Finally, moving out to a radius of one mile, covering an area of about nine square miles around each polling place, much more of the registered voter population of the county is included living within this space. In 2018, 46 percent of voters can be found situated within one mile of a polling place (see Table 2). This also means that slightly over half of the County's voters reside in tracts beyond one mile.

³ For additional detail on selection of appropriate polling sites, see https://www.eac.gov/assets/1/6/Chapter_9_Polling_Place_and_Vote_Center_Management.pdf, accessed August 10, 2019.

In recent years, certainly, it is fair to say that more than half of all Waller County voters traverse more than a mile of distance to reach a polling place, whether they are voting early or voting on Election Day.

Although a substantial proportion of Waller County residents live within one mile of a polling location, overall turnout is not higher in either the 2016 and 2018 general elections for these voters, than for those living further away. Specifically, Table 2 shows that total turnout among voters living within one mile of the precinct polling place in 2018 was about 37 percent, compared to 51 percent for those living further than a mile away. Table 2 also shows that those living within a half mile were not more likely to vote than those living further away. Finally, even for the few people living within a few blocks of a polling site, Table 1 shows that turnout is much lower than for voters further away. In 2018, those living closest to a precinct polling place, within 1,320 feet, turned out at 29 percent, compared to a much higher 46 percent rate for those living beyond one-quarter mile (see Table 1).

Proximity and Early Voting.

The results in Tables 1, 2 and 3 suggest that there must be much more to the turnout of Waller County voters than how close they live to a polling place. Figures on early voting turnout show that voters living proximate to early voting sites certainly took advantage of the early voting option in large numbers, though not always at a higher rate than those living further away. Of course there is no especially compelling reason to expect that voters living close to an early voting site would use those sites to vote early. After all, the early voting sites double as Election Day sites in most elections. If an Election Day site is just a walk around the corner, inconvenience is minimal compared to the voter whose Election Day site is several miles away. Motivated voters living a few blocks from a polling place may still appreciate the opportunity to cast their vote early, and acquire the habit of doing so, but all other things being equal, it is the voters further away from these sites that one would expect to cast

more early ballots because they are more motivated by the need to overcome the costs of distance.

This is the pattern that shows up in the data below.

Overall, the data from Waller County showing who avails themselves of the option to vote early in 2018 suggests that this method is used more by people who live further away from precinct polling sites (including early voting sites), not close to them (see Table 4). For those who live outside a half mile of distance, 34 percent voted early in 2018, compared to 21 percent living within a half mile. For the one-mile distance radius, 34 percent living within a mile cast early votes, compared to 40 percent of those living beyond a mile.

This tendency for those further out to vote early at higher rates should not be a surprise because the population of the county is scattered across a large territory (see Map 1). The entire point of early voting is to provide a convenience to those who may otherwise struggle to get to an Election Day site during the particular Tuesday and the twelve hours they are open. Harried voters may face the obstacle of time, distance, or both. The reasonable and commonplace assumption made by election administrators is that those who live close to Election Day sites will have fewer problems casting their votes than those living further away. Even so, time on a busy Tuesday may be an impediment to voting even for those who live less than a mile from a polling place. This is why Waller County election officials have not placed early voting sites solely in rural, sparsely populated areas (e.g. Precinct 417, 206) where distance may be the chief obstacle, but also in towns such as Hempstead, Brookshire, Prairie View and Waller. Different voters face different inconveniences. Waller County's decision-making on where it should place early voting sites reflects this reality.

Aside from the need to spread coverage across the county to offer everyone reasonable access to the early voting option, the early voting sites are situated in locations accessible to those most likely to use them. In 2018, early voting sites were situated in eight locations, in eight different precincts (nine precincts are listed in Table 5 because one site is traditionally designated for the two Katy-area

precincts: 419 and 420). Comparisons with other counties show that eight early voting sites is a very large number of locations for a Texas county of this size.

Table 4. Early Voting in 2018 by Those Living Inside and Outside 1/2 and One Mile Distance to Polling Place							
<div>Did Not Vote Early</div> <div>Voted Early</div>	Half Mile				One Mile		
	Outside	Inside	Total		Outside	Inside	Total
	15781	5872	21653		9192	7834	17026
	65.7%	79.0%	68.8%		59.8%	66.5%	62.7%
	8244	1565	9809		6188	3951	10139
	34.3%	21.0%	31.2%		40.2%	33.5%	37.3%
	24025	7437	31462		15380	11785	27165
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
Percentages tabulated down the columns							
Source: Waller County Voter File and author’s calculations							

The figures in Table 5 show that the percentage of voters casting early ballots who live in close proximity to the early voting sites varies by location to some extent. In precincts where the population around the early voting site is denser, naturally there are more people in a position to avail themselves of the early voting option. Examples include Precincts 101, 208, 417 and 420 in the towns of Hempstead, Waller, Brookshire and Katy. In only two precincts, 208 and 417 do we find a higher percentage of voters living within a quarter-mile of the site engaging in early voting. At the half-mile range of distance, early voting happens at a higher rate for voters closer to the site only in precincts 311 and 419, though at the latter location there are very few residents geocoded as living this close. At one mile of distance, four of the nine precincts show higher rates of early voting by those living closer to the site. The conclusion from these comparisons is very clear. Generally early voting is utilized more by those living *greater distances* from the polling place. Proximity to the early voting site does not predict that more votes will be cast early.

Table 5. 2018 Early Voting Turnout by Waller County Voters Inside and Outside Specific Distances from Early Voting Locations

Precinct	Quarter Mile			Half Mile			One Mile		
	Outside 1/4 mile	Inside 1/4 mile	N Voted Inside	Outside 1/2 mile	Inside 1/2 mile	N Voted Inside	Outside 1 mile	Inside 1 mile	N Voted Inside
101	33.8%	25.9%	48	35.9%	26.1%	142	41.3%	26.1%	266
206	33.8%	28.3%	13	33.8%	32.3%	42	33.8%	32.7%	92
208	30.1%	32.1%	88	32.5%	27.5%	183	38.7%	27.1%	312
309	24.0%	8.5%	101	37.6%	6.2%	145	17.7%	19.5%	789
310	29.5%	28.7%	25	29.6%	29.2%	112	25.9%	31.4%	366
311	33.6%	13.6%	3	32.9%	35.7%	15	32.2%	37.2%	48
417	23.4%	31.2%	67	24.8%	24.5%	163	23.7%	24.8%	287
419	56.1%	0.0%	0	55.6%	100.0%	2	46.3%	59.6%	68
420	41.3%	39.0%	92	42.2%	39.5%	248	46.0%	40.4%	472

Source: Waller County Voter File and author's calculations

Precincts 309 and 310 in Prairie View report a small proportion of voters living within one-quarter mile of distance from their early voting sites, but using this definition of proximity, the rate of early voting is still higher further away. Comparing those who live within a half-mile of the Tempton Memorial Student Center to those further away, the turnout closer to the site is still considerably lower (6.2 to 37.6%). It is only at the one-mile radius of distance that turnout in Precinct 309 is slightly higher for those living closer (19.5%) than for those more distant (17.7%) from the polling place on the Prairie View A&M campus.

In Precinct 310, turnout is about the same for those living within a half-mile as it is for those living beyond that distance (29.2 to 29.6%). More residents living within the one-mile range of the Prairie View polling site voted early than those living further away, by a margin of 5.5 points (31.4 to 25.9%).

Early voting use by voters in Precincts 309 and 310 increased over where it stood in previous elections, but it is very doubtful that changes in site placement had anything to do with the increase. A better explanation for the surge in participation was the heightened interest associated with the hard-fought 2018 U.S. Senate contest. With the stimulus of competitive elections, interested voters face no impediments reaching any of the Waller County voting sites. This is clear from the peaks-and-troughs in turnout visible since the 1990s. If participation was uniformly low across all elections in Precincts 309 and 310 there would be more cause for concern that changing site locations was depressing turnout.

Countywide, opportunities to vote early were not appreciably reduced from 2016 to 2018, particularly considering the lower turnout that generally accompanies mid-term elections. In 2016, early voting sites had been placed at nine locations, a decision reflecting higher voter demand in presidential election years as seen in Figure 1. In both general elections the sites remained the same for six locations. The main difference between the two elections was that in 2016 there were three sites in Prairie View whereas in 2018 there were initially only two, with the St. Francis Episcopal Church site

removed. Waller County added a third Prairie View site at the Waller County Community Center, a familiar location close to campus. The early voting site in Katy was also moved from one year to the next, a shift of about 2 miles. It is not unusual in light of the lower turnout usually observed in mid-term elections to reduce the number of early voting sites and their hours from a presidential election year. Election administrators do not have crystal balls that can predict weeks in advance—the time when early voting plans must be formulated and adopted—when a mid-term election will break statewide or local turnout records for a mid-term election. Waller County officials have the same limited history and experience to guide them that shapes administrative decision making everywhere else.

Importantly, Waller County officials were responsive to late requests by members of the voting public, as they had been in the past, ultimately placing three early voting sites in Prairie View.⁴ Notably, the 2018 early voting sites in Prairie View were opened for more hours than in 2016. Early voting hours were reduced in Katy and two other locations between 2016 and 2018, but also increased in three elsewhere. There were more total early voting hours in the county in 2018 than in 2016, in spite of the fact that general elections in non-presidential years almost always see fewer total votes cast. The extension of these hours underscores just how willing Waller County officials were to be flexible in the face of a growing population and in the midst of changing electoral environments.

To sum up, given the mix of results presented in Tables 4 and 5, these data cast doubt on just how much proximity to an early voting site elevates the propensity to vote early, or how difficult it is to cast an early vote if an election outcome is highly uncertain and voters are motivated to get involved. The tendency for those who live distant from a polling place to cast early ballots is because they are among those who find voting on Election Day inconvenient precisely because the polling places are far

⁴County minutes and records show that Waller County has repeatedly considered and granted public requests to add days and hours to early voting locations. Their cooperation and responsiveness in 2018 was not new. Available records show county officials responded affirmatively to requests in 2017 and 2004, with the Commissioners Court voting unanimously in favor of measures to extend days and hours.

from where they live. They are the most inconvenienced by the geographic location of these sites relative to their residences and most in need of the ease of casting an early vote. This explains why living far from an early voting site predicts higher early voting use in many Waller County precincts shown in Table 5, and in past elections.

Finally, comparing early voting use in Precincts 309 and 310 across election years shows big fluctuations in early voting use by Prairie View residents similar to the turnout figures shown in Figure 2. Early voting in these precincts surged in 2018 to the levels only seen in presidential years, but not as a response to precinct relocation or the expanded early voting hours. The volatile ups-and-downs in turnout and early vote use in Waller County and elsewhere have little to do with the locations of precinct sites and their hours, which do not vary much across a long span of time, and more to do with the stimulus of the particular election, the candidates and the effort expended by campaigns. Whether voters in Precinct 309 wound up voting at the Tempton Student Center or the Waller County Community Center, the data do not suggest that voters in Prairie View or at Prairie View A&M have to travel any greater distance to cast an early ballot than most other voters in Waller County.

Waller County alongside Other Communities

The plaintiffs level serious accusations against Waller County officials that have no basis given the realities of election administration as practiced throughout Texas over the past two decades. Comparing Waller County's polling place siting policies alongside those of similarly sized counties reveals just how generous Waller County has been in providing service that far exceeds the minimum legal requirements.

For comparison purposes it is illuminating to examine the polling place sites and related decisions made by eight other Texas counties of similar size, each housing a medium-sized college campus. Choosing counties of approximately similar size is important to evaluate how local election

officials choose to serve the populations of their counties, both in the number of sites they place in the county, the specific locations they choose, and how they regard the college campuses in their midst.

The eight comparison counties are listed in Table 6, along with population estimates from 2017 and recent campus enrollment figures.

What is remarkable about these counties is that in spite of their limited size range, they provide very different numbers of precinct polling places and early voting sites. Without question, policies vary widely at local discretion. Not a single county listed in Table 6, except Waller, places a precinct polling site on a college campus, much less an early voting site. There is no common tradition or practice in Texas among mid-sized counties of placing precinct polling places directly on a college campus in the way that Waller County does for Prairie View A&M.

Table 6. Comparison of Similarly Sized Counties with College Campuses in Texas			
County	Population Est. 2017	College Campus	Enrollment
Erath	41,969	Tarleton State	13,011
Hunt	93,872	Texas A&M Commerce	13,065
Kleberg	31,088	Texas A&M Kingsville	8,682
Nacogdoches	65,580	Stephen F. Austin	12,614
Randall	134,442	West Texas A&M	10,169
Tom Green	118,019	Angelo State	10,362
Victoria	92,082	University of Houston-Victoria	4,427
Walker	72,245	Sam Houston State	20,398
Waller	51,307	Prairie View A&M	9,431
Sources: Texas State Data Center for population estimates, Texas Higher Education Coordinating Board for enrollment information			

Erath County

Stephenville, Texas, is the county seat of Erath County, home of Tarleton State. Stephenville is located approximately 1 hour and 20 minutes southwest of Fort Worth. Early voting took place in just two locations, the County Courthouse in Stephenville and a second location in Dublin, Texas, about 14

miles away. The Courthouse location is slightly less than one mile from the Tarleton State campus, an estimated 16-minute walk. Erath County provided ten total polling places for its registered voter population of 22,492 in 2018.

Hunt County

Hunt County lies northeast of Dallas, at the edge of the DFW metropolitan area. The county seat and largest city is Greenville (pop. 27,443). Lying northeast of Greenville 15 miles is the smaller city of Commerce (pop. 9,147), home to Texas A&M University-Commerce, with a student enrollment of 13,065. In 2018, the county divided its 55,000 registered voters into 34 precincts, each with its own polling place. Early voting was sited during the entire early voting period in a single location in the town of Greenville, at the central election administration office. This location is 13.6 miles from the edge of the Texas A&M-Commerce campus. As for the city of Commerce itself, there were three Election Day polling sites (Precincts 427, 428 and 429) but no early voting sites in 2018. The Commerce City Hall location is situated 1.2 miles from the Rayburn Student Center, a focal gathering point on campus; the First United Methodist Church location lies about 0.4 miles west of the Student Center – an estimated 8-minute walk; and the Sand Hills Country Club site is 3.6 miles south of the campus, well outside the city of Commerce. There were no precinct polling locations in any building on the Texas A&M-Commerce campus in 2018, nor were there any located on campus in 2016 or 2014.

Kleberg County

Kingsville, Texas, is the hub of Kleberg County and home to Texas A&M-Kingsville, a campus with an enrollment of 8,682. In 2018, Kleberg election officials opened 17 polling sites for 18 precincts serving a registered voter population of 18,186. There was only a single early voting site positioned in Kingsville, the Early Voting Annex Office, open during the entire early voting period. This location is

situated 1.6 miles from the campus of Texas A&M-Kingsville, an estimated 32-minute walk. There were no Election Day or early voting sites placed in any building on the Texas A&M-Kingsville campus in 2018, 2016 or 2014.

Nacogdoches County

Nacogdoches, Texas, is in East Texas, located in Nacogdoches County (pop. 65, 580), and the home of Stephen F. Austin State University which enrolls 12,614 students. In 2018, Nacogdoches election officials sited 10 polling places for 18 precincts. Early voting was available for the entire two-week period at the Nacogdoches County Courthouse Annex Building. Five temporary branch early voting locations were open from 8 am to 5 pm on a single day, Monday, October 22, 2018. None of these early voting locations were located on the Stephen F. Austin campus. The main campus lies about one mile from the County Courthouse building that serves as the central early voting location, an estimated 22-minute walk. Four of the temporary early voting locations are at greater distances. One early voting location, sited at Grace Bible Church, is about 0.4 miles from the Baker-Patillo Student Center, a central congregating point on the Stephen F. Austin State campus.

Randall County

Randall County is situated in the Texas panhandle and abuts the city of Amarillo on the south side. Though it is considerably larger than Waller County, it is notable for having just five early voting sites, fewer than Waller. The County divides its registered voters among 22 precincts, and 13 Election Day polling places. The West Texas A&M campus, with an enrollment of 10,169, is located in the city of Canyon (pop. 15,306), also the county seat. In 2018, the closest early voting site to the campus was the Randall County Justice Center, about one block north of Russell Long Boulevard, the street that bounds the campus on the north side, or about 0.4 miles from the Jack B. Kelley Student Center, a hub of

student activity. A second early voting site was situated at the Randall County Election Administration Office, about 0.6 miles from campus, an estimated 12-minute walk. There were no polling places situated in any building on the WTA&M University campus in 2018.

Tom Green County

Tom Green County is the site of Angelo State University, with an enrollment of 10,362, in the city of San Angelo. Like Randall, this county is also substantially larger than Waller (pop. 118,019). In 2018, 19 voting centers were sited there, all but two with San Angelo addresses. Early voting was available at the central County Elections Office and at four branch early voting sites. None of these early voting locations were on the campus or even on the edge of the Angelo State campus. The nearest one, on Knickerbocker Road, was about a half mile away from the southern boundary of the campus, at least a mile from the center of campus. The central early voting site was 2.4 miles away from campus, at least 45 minutes on foot. The Central High School polling location was two miles away, and the other two branch locations were at substantially further distances.

Victoria County

The largest city in Victoria County is Victoria (pop. 67,106), also home to the University of Houston, Victoria, and 4,427 enrolled students. The County's voter rolls listed 55,473 voters in 2018, and divided them among 36 precincts, each with its own Election Day polling place, including one private residence (Precinct 16, at 1499 San Antonio River Road). Victoria opened one early voting site for the fall 2018 general election, the main one, at the Patti Dodson Public Health Center, for the entire two-week period. Three other branch locations were open more limited days and hours in the second week. The central location for early voting was located about 2.2 miles from the UH-Victoria campus.

The other locations were substantially further away. There were no Election Day polling places on the UH-Victoria campus, and none lies within a half mile of the campus.

Walker County

Walker County's principal city is Huntsville (pop. 41,277), home to Sam Houston State University with an enrollment of 20,398, the largest of the colleges listed in Table 6. The county's 33,000 registered voters are divided among sixteen precincts. Early voting in 2018 occurred at a single location, the Walker County Annex, opened the entire two-week period. This location lies about 0.6 miles from the Lowman Student Center of the Sam Houston State campus, and about 0.3 miles from the northern boundary of the campus. In 2018, there were no polling places sited on the Sam Houston State campus, either for early voting or for standard Election Day balloting. The nearest Election Day polling site in 2018 was University Heights Baptist Church, about a half mile from the southeastern edge of the campus and approximately one mile from the Lowman Student Center.

Other HBCU Campuses

There are several well-known historically black colleges/universities in Texas and neighboring states. Although these are usually located in more populous locations than Waller County, it may be of value for comparison purposes to determine whether there have been any early voting locations or Election Day polling places sited on these campuses. Upon inspection, the results are largely the same as for the other state university campuses set forth above. Rarely does one find an early voting site placed on campus. Texas Southern University is located in downtown Houston. For 2018, the nearest early voting location for those living in and around Texas Southern was more than 3 miles away from campus, requiring more than an hour to walk.

Tyler, Texas (pop 104,991) is home to Texas College, a small private school with fewer than 1,000 students enrolled. In 2018, Smith County election officials did not place any early voting sites on campus. The nearest site to campus was 2.2 miles away, an estimated 45 minute walk, traveling south into downtown Tyler. There are no Election Day polling places on the campus and the nearest site was at an elementary school, 0.7 miles away.

Wiley College is a private school located in Marshall, Texas (pop. 23,195), in Harrison County. The campus is small, and enrollment at the Marshall location is less than 1,000. Notably, Harrison County did place an early voting site on the campus in 2018, at the Hodge Center. This location was open for three days and a total of 27 hours during the first week of early voting. The Hodge Center is also the traditional Election Day polling place for Precinct 3 voters in the city of Marshall.

Finally, although Louisiana's early voting law is different in important respects from that of Texas, there is no evidence of any early voting sites placed on the Grambling State University Campus in Grambling, Louisiana, situated in Lincoln Parish, Louisiana (pop. 47,744). Grambling State is among the best known of historically black colleges, hosting a student population of 5,205 students. In 2018, early voting took place at a single site situated at the Lincoln Parish Courthouse in Ruston, Louisiana, approximately 5.6 miles east of the Grambling campus. The nearest Election Day site was placed east of the campus at the Grambling Town Hall, about 0.7 miles from the Favrot Student Union, a central gathering place on campus. There were no Election Day sites placed in any building on campus.

Summary

What is learned from a survey of what these other, similarly sized, Texas counties do with respect to election administration? First, none of these locations with colleges hosting student populations similar in size to Prairie View A&M placed either early voting sites or Election Day voting sites on their local campuses. This is not only true for 2018, but for several previous general elections

as well. There is simply no tradition in *any* of these counties for placing polling sites in *any* building on campus. With the exception of Harrison County's use of the Wiley College building – a building easily accessed by Marshall community members because of the college's diminutive size – Waller County stands out from these other counties for its willingness to use the Prairie View A&M Tempton Center as an Election Day polling place. That it would also permit early voting to take place there in 2018, for any number of hours, is also a unique practice among counties of this size that host comparably sized college campuses.

Second, there are cases in which the off-campus polling places in these counties are sometimes close-by the campus and within an accessible walk of several blocks – Randall County is such an instance. But more often than not, the precinct polling places in the community are not within a few minutes' walk from campus boundaries, much less from the center of campus. Driving would certainly be manageable in each and every case, but not that many Election Day or early voting sites can be found less than a half-mile from a campus boundary. That Waller County would choose to use the Waller Community Center in Prairie View as a polling place in 2018, and in many previous elections, offers a degree of proximity to Prairie View A&M voters that is not commonly found in other Texas counties containing mid-sized college campuses.

Third, there is clearly considerable leeway and flexibility granted to local election administrators in their decision of how many Election Day and early voting sites to open, where they should be placed, and the hours they should be staffed. Practices appear to vary widely, from several precincts sharing a single site in Randall County, to each precinct having its own distinct polling place, in Victoria and in Hunt Counties. Several counties open only a single early voting site, for the entire two week period. Others open several branch locations in addition to a central site. Days and hours for these sites vary in both weeks, with a common practice of opening the satellite locations only in the second week and on weekends while the central location remains open the entire period (except weekends). The larger

counties generally offer more expansive early voting hours, but for counties that are larger than 100,000 there is a state mandate to follow. At present, Texas state election law requires that the larger counties make early voting available for 12 hours per day in the second week.⁵ The larger counties also open more early voting branch locations, following Texas law.

Placement and Movement of Sites in Waller County across Time

The above review shows that given the mix of local administrative traditions that adhere across Texas, there is certainly nothing improper about the way Waller County has operated its elections with respect to precinct siting. Waller County's longstanding practice of placing Election Day polling sites on and near the Prairie View A&M campus stands out as exceptional when compared to other Texas counties of the same size that host college campuses. County records reviewed in the course of this research show that the placement of an Election Day site on the campus dates at least to the early-1990s, and probably well before then. The Prairie View A&M Student Center (not the Tempton Memorial Student Center, which was completed in 2003) was used as an Election Day site in the general elections of 1994, 1996 and 1998, for what was then Precinct 12. A site called The Newman Center, once the Catholic student center near campus (this building located on Thompson Drive and FM 1098 has since been closed for this purpose), was also used as an Election Day polling place during this period for a second precinct, Precinct 15. For reference, this location was situated across the street (Owens Road) that bounds the south side of the campus.

The move from just one central early polling place (the Waller County Courthouse location in Hempstead) to two occurred with the 1994 general election. The second location was opened in the southern end of the county at the Waller County Tax Office Annex in Brookshire, a decision that

⁵ Texas Election Code, Sections 85.001 and 85.002.

reflected Brookshire's registered voter population and high voting propensity. Early voting continued through the 2000 election at just two sites, one in Hempstead and the other in Brookshire.

Since the mid-1990s, the record of polling place siting in Waller County has not shown declining or diminishing accessibility over time. One might understand voicing a complaint if Waller County expanded early voting locations but ignored Prairie View (the town or the college) altogether. But that is not what happened. As early as 2002, as soon as early voting moved beyond just two sites, an early voting location was made available for two days (9 am to 4 pm) at the Smith, Coleman and Kemp Community Center (an earlier site at the same location as the more recently built Waller County Community Center) adjacent to the campus, a few blocks' walk from the present location of the Tempton Memorial Student Center. Placement of early voting sites that year reflected the traditional density of voter settlement, with Brookshire getting the most hours besides the Hempstead central office, and Katy and Fieldstore receiving the fewest, 7 hours each. Prairie View, by contrast, received 14 hours on a Thursday and a Friday. Importantly, other growing parts of the county received no nearby early voting locations, and certainly none as near to their residences as those situated in Prairie View are to the people who reside there.

In 2004, Waller County made early voting available at the same Smith, Coleman and Kemp Community Center, that had been used in 2002, opening for 14 hours on a Wednesday and a Thursday.

In 2006, the Courthouse, as usual, was the main early voting location, and temporary early voting sites were placed at four other traditional voting sites: the Smith, Coleman and Kemp Community Center (2 days, 14 hours) in Prairie View; an upcounty location at the Fieldstore County Building (1 day, 6 hours); the Katy VFW Hall (1 day, 6 hours); and in Brookshire at the Waller County Library (4 days, 27 hours). All of these locations were familiar to county voters based on previous use.

The 2008 presidential election saw early voting locations opened at three branches (in addition to the main early voting site in Hempstead): in Hockley at the Houston Oaks Country Club; again at the

Waller County Community Center in Prairie View; and at the Brookshire Convention Center. All three of these satellite locations were open identical days and hours, October 23-25, for 12 hours each day.

By 2010, Election Day polling sites included the same Waller County Community Center where it had been since 2002, and at the Prairie View City Hall, a change from the abandoned Newman Center site. Early voting was scheduled at the same Waller County Community Center, for three days, again offered for 12 hours for each of those days. Just as in 2008, two other branch sites were opened for early voting: the Houston Oaks Country Club in Hockley, and the Brookshire Convention Center in Brookshire. As in 2008, three sites were given the same days and hours. The 2012 general election saw a repeat of the 2010 practice. Branch early voting was distributed to the same three sites as in 2010 and 2008, for three days, 12 hours each day, for a total of 36 hours.

In 2014, the Election Day site for Precinct 309 moved to the Tempton Memorial Student Center at Prairie View A&M. Precinct 310's Election Day site remained at the Prairie View City Hall. Early voting locations serving the Prairie View voting population were situated at the Prairie View Alumni Building and at the St. Francis of Assisi Episcopal Church. The PVA&M Alumni Center was just slightly further to walk from the center of campus than the Waller County Community Center, and the same goes for the church. Both lie a block south of the street (FM 1098) that bounds the south side of the campus. The church was scheduled for two days – a total of 24 hours. The Alumni Center was scheduled for four hours on a single day.

In 2016, the Election Day sites remained the same as 2014 for the Prairie View precincts. The early voting sites were placed this time at the Prairie View A&M Tempton Memorial Student Center from 11 am to 8 pm for two days (18 hours), and at the same Episcopal Church (as in 2014) from 11 am to 8 pm, also for two days (18 hours). The move to an 11 am to 8 pm schedule applied to the other early voting branch locations open during the second week as well.

For 2018, the Election Day sites for Prairie View area voters remained the same as in 2016 and 2014. Early voting was made available at the Tempton Memorial Student Center, and moved from the Episcopal Church back to the Waller County Community Center, about one block closer to campus residents than the church. A third site at Prairie View City Hall was opened for early balloting on Sunday (October 28, 5 hours). Hours for early voting at the Tempton Memorial Student Center were the most generous they have been in the history of early voting in Waller County, running from 8 am to 5 pm for three days (27 hours) during the second week of the early voting period (then later adjusted upward to total 36 hours). By contrast, early voting at the Tempton Center had been available for only two days and 18 hours in 2016. Early voting at the Waller Community Center, just off the campus, was held for two days and 24 hours in the second week. Notably, the days at the three Prairie View locations did not overlap, providing more opportunity for voters to overcome whatever barriers they faced in reaching the polls.

A review of Waller County election administration for general elections going back more than 20 years yields several conclusions. First, the Waller County Community Center is a customary polling site, quite familiar to residents, and repeatedly used as a place to vote as far back as the 2000 general election, though in a previous building at that site known as the Smith, Kemp and Coleman Community Center. As a regularly used site for voting in Prairie View, it does not appear to have been the target of complaints in the many previous elections in which it has been utilized. The complaints about it are seemingly new. Moreover, turnout in 2018 in both Prairie View precincts was very robust, exceeding that of 2016 and much higher than the previous mid-term election in 2014. Site changes across those three general elections were minimal, though early voting opportunities were greater in 2018 than in previous elections given the added location at the Waller Community Center.

Second, Waller County's use of the Prairie View A&M campus student center is not a recent development, either, though the Tempton Memorial Student Center was only completed in 2003. Use

of a building known as a student center goes back at least to the mid-1990s, if not before. If Waller County officials are determined to discriminate against the voters on the Prairie View college campus, then it does not make sense to place any voting sites at all in any building on, or immediately adjacent to the campus, an early voting site or one for Election Day either. In denying Prairie View A&M a polling place on campus, the county would certainly not be out of line with the practice of other Texas counties.

The charges of discrimination leveled against Waller County election officials do not hold up well from the perspective of the way the county has expanded early voting since the mid-1990s, either. Instead of expanding early voting in locations other than Prairie View, and ignoring Prairie View itself, Prairie View was among the *first* communities to receive an early voting branch location. Moreover, the county has recently opened not one, but two of these locations on or very close to the campus. Strictly on the basis of voter population and demand for early voting, two early voting locations may not be justified. But these polling place decisions are consistent with Waller County's historical placement of polling locations and the County's efforts to provide early voting opportunities in Prairie View. The decision on where to place sites is not solely a technical calculation, or the map of early polling sites in Waller County would look quite different, a point to be addressed in the next section.

Allocation of Early Voting Sites Based on Demand

A class of models developed by engineers, logistics and supply specialists have evolved over time within and across several academic disciplines to assist in the optimal planning and siting of facilities designed to serve customer, consumer, or public demand for access and service. These are known as *location-allocation* models and, briefly, the point of them in the election administration

context is to identify the best site from a list of candidate sites, that will maximize service to the largest number of users of that service (Church and Murray 2009; Drezner and Hamacher 2002).⁶

A fundamental assumption of location-allocation research is that some locations will be better than others for a particular purpose. Given that early voting sites in Waller County have mainly been selected from a subset of the more traditional, Election Day sites (except the Courthouse location, always open), which of these sites would offer the best access to registered voters if only a limited number of them could be opened? Solutions to these types of puzzles are well enough accepted at this point that estimation routines are readily implemented in many geographic information systems (GIS) software programs. In the maps that follow, optimal early voting sites are shown based on the location of all registered voters. Results will be presented only based on the locations of voters geocoded from the 2018 general election, though arguably earlier versions of the voter file capturing the County's 2016 and 2014 electorates would be more realistic since Waller County election officials would not have had a full picture of the 2018 voting electorate at the time they were considering site locations for October and November 2018.

For now, though, moving forward with the 2018 data, the residences of the registered voters are conceived of as demand points. No differentiation is made, at the outset, between those who have used early voting, and those who have not. All voters throughout the county are treated equally as prospective early voters. In addition to the demand sites (all voters' residences), there need to be prospective supply sites, sites where early voting locations could be placed. For those, the nineteen Election Day sites are used here. To those, one can add the Waller County Community Center, the site in Prairie View that was used for early voting in 2018 (in addition to the Tempton Memorial Student Center and the Prairie View City Hall). The County is not necessarily limited to just those sites, and location modeling need not restrict the possible choices to only those sites. But given that the County's

⁶ Accessible treatments of location analysis modeling and implementation in GIS software can be found in Church and Murray (2009). In ArcGIS, for example, the implementation is found in the Network Analyst extension.

typical practice has been to make early voting available at one of the Election Day sites, this limitation seems reasonable and in line with past practice.⁷ The distance from each voter to each potential early voting site is calculated. The number of early voting sites to open is also specified because the number of sites might be fixed by a given budget for the conduct of elections. In 2018, eight early voting sites were opened. In 2016, nine sites were opened. The estimation of the model can proceed by specifying any number of early voting sites from just one to eighteen (if there are nineteen possible candidate sites).

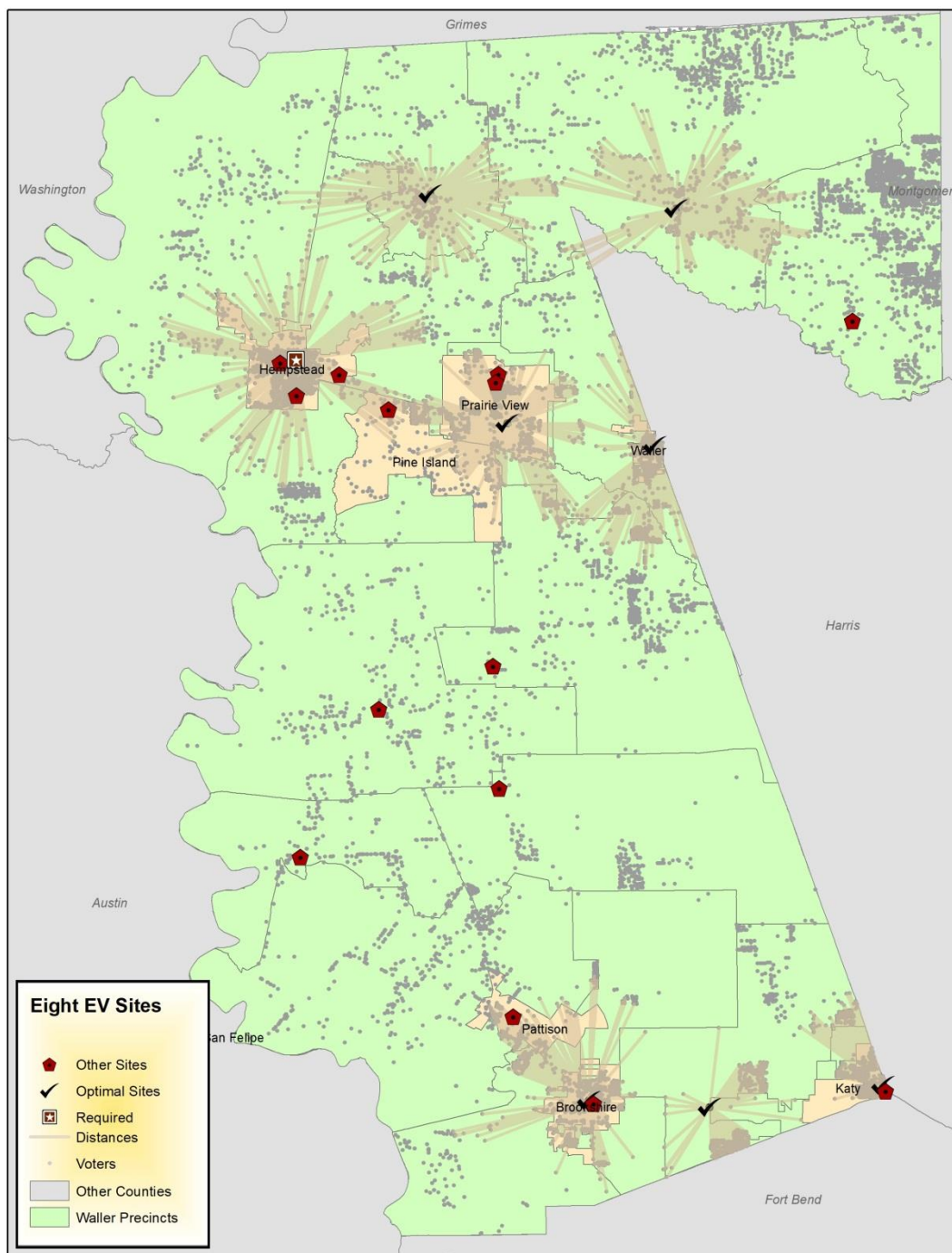
In the particular implementation of the location-allocation model presented here, the goal is to minimize the distance between the voters' residences and an early voting site for all voters within four miles.⁸ Other distance cut-offs could be selected. Four miles seems reasonable given the size of Waller County precincts and because fewer than 12 percent of Waller County voters live beyond four miles of an Election Day site. If a model can place a limited number of early voting sites optimally for the more than 88 percent of Waller County voters who live within four miles of an Election Day site, then the vast majority of the demand for convenience voting can surely be satisfied by that placement plan. This implementation seeks the best match of each voter residence to only one early voting site, the most proximate one, though that site is not necessarily within the precinct boundaries of the voter's assigned precinct. This is because under Texas law voters are free to vote at multiple early voting sites, not confined to the one for designated for their precinct as is the case for Election Day voting. The result of implementing this location-allocation model will be to provide a determination of the sites that can serve the greatest number of voters within a four-mile distance band.

⁷ It is certainly possible to estimate the best locations using all sites within the county that could possibly be used, all schools, all suitably equipped churches, libraries, fire stations and other government and private buildings, but such a list is not presently available. Future versions of this research could consider all of these options.

⁸ This implementation is known as a location set covering problem and involves locating voting places to cover voter residences within a predefined distance, in this case four miles. Results for a five mile solution are also available.

In Map 2 an eight site solution is presented showing the placement of early voting locations for best coverage of Waller County voters if only eight sites can be opened. The optimal eight sites are shown by the black check marks. Other non-selected sites (Election Day sites) are shown in red. The permanent and required site at the county courthouse is indicated by a red square (in the town of Hempstead). Notably, strictly applied, this solution would not warrant placement of an early voting site on the Prairie View A&M campus. With only eight sites to allocate, only one site in the Prairie View area is selected, the Prairie View City Hall. The Waller County Community Center is also considered as an option here, but it is not selected either. Given the central location of the Prairie View City Hall to all the voters in Prairie View, the Waller County Community Center is not selected among the best eight because it simply lies too close to the college campus to cover appreciably more voters than are already covered by the use of the City Hall.

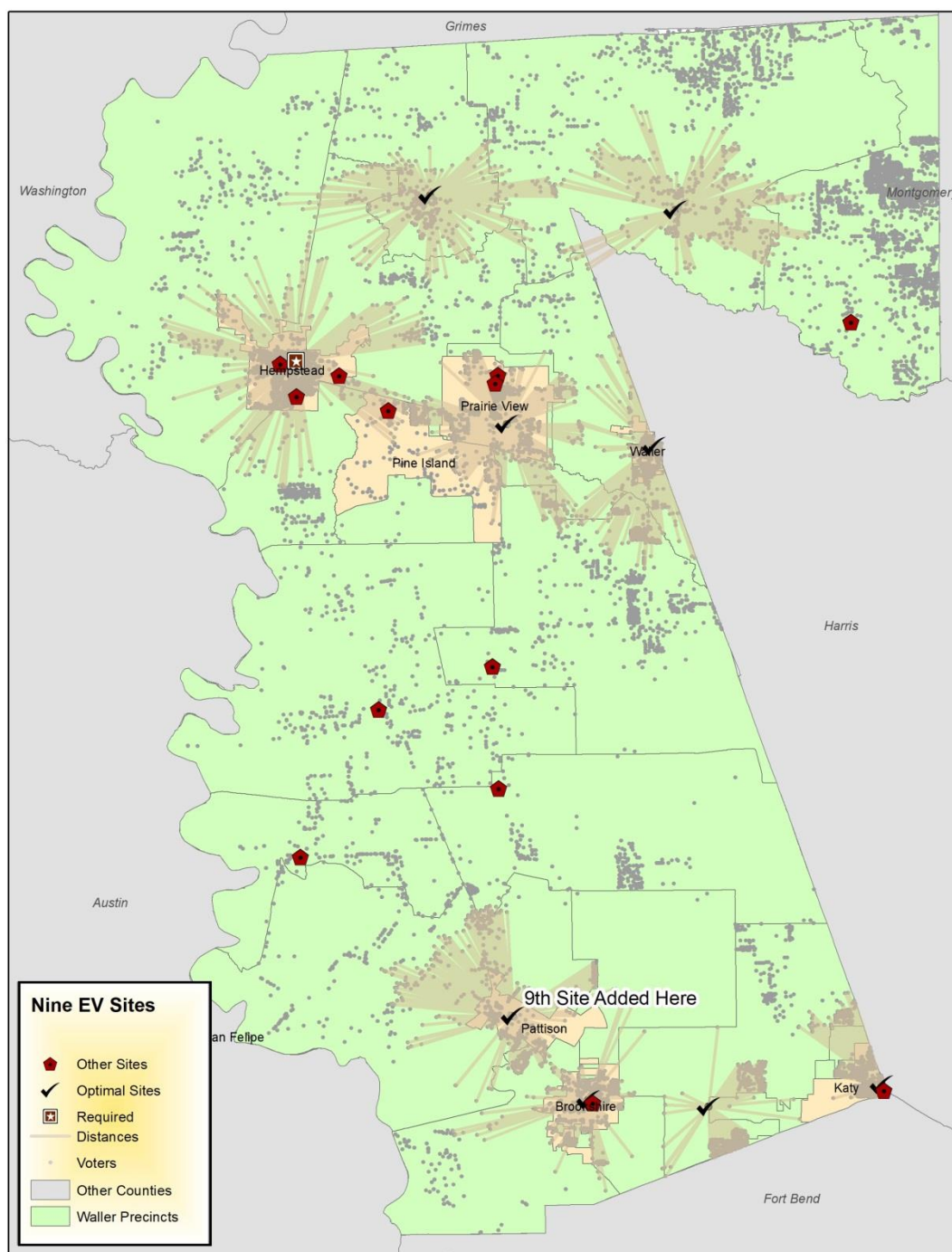
Notably, only one site is selected in each of the towns of Hempstead, Brookshire, Waller and Katy. Three other sites in more sparsely settled reaches of the county are also selected. Two are in the upcounty region, at the Fieldstore County Building in Precinct 206 and the other in Precinct 105. Notably, there is no site placed in Monaville (Precinct 311). Unquestionably, the eight site solution differs from the County's actual placement of sites in some important respects. As calibrated, this model based on voters' residences would add a site at the Rolling Hills Fire Department and at the Igloo location between Katy and Brookshire (see check marks in Map 2). Waller, Hempstead and Prairie View would receive just one site each. Monaville would not receive any early voting sites. This is how eight sites would be geographically distributed, based solely on accessibility to the vast majority of registered voters in the county, treating every voter equally as a point of demand. Given the basic parameters of this model, it is extraordinary that the Prairie View area would receive not just two, but three early voting sites in 2018.



Map 2 Optimal Location Allocation of *Eight* Early Voting Sites to Cover Waller County Registered Voters 2018

What about placement of nine sites? If County election officials were making the effort to cover all registered voters but budgeted for nine sites rather than eight, where should those nine sites be placed if every voter counts equally in the solution? Map 3 reports this result. With nine sites opened, Pattison receives a site at the Pattison VFW Hall. The other sites remain the same as where they were in Map 2. Moving from eight to nine early voting locations does ensure that some additional voters in the sparsely populated central part of the county are serviced that were not covered before. But it does not make sense to place this site in Prairie View, on the campus as long as there is a site also available at the Prairie View City Hall. Of the possible early voting sites, the City Hall site is the superior location relative to all of the voters who live in that vicinity.

The placement solutions shown in Maps 2 and 3 do assume that all voters in the county are to receive equal weight in the site location modeling. Some may object to this assumption, insisting that some voters be given greater consideration than others. This is an increasingly difficult argument to sustain given that early voting is now practiced by such a rapidly growing proportion of voters throughout Texas and in Waller County. There may have been a time, perhaps twenty years ago, when early voting was new and only used by a select few of people who were desperate for the convenience. Others either didn't find Election Day voting to be so difficult, or were simply unaccustomed to exercising their option to vote early. In recent elections, however, more voters are casting ballots early than are on Election Day. As mentioned above, voters face various inconveniences and competing demands. Distance from important destinations is one of these, but some people's time constraints are more limiting than what can be captured by measuring their distance from home to a polling place. Certainly one can estimate location models that weight the people in the most far-flung areas of the county as especially disadvantaged, seeking to place early voting sites closer to them. But others might convincingly argue that too few people are located out in these remote edges of county. The more densely settled parts of the county plainly need early voting sites because there are more



Map 3. Optimal Location Allocation of Nine Early Voting Sites to Cover Waller County Registered Voters 2018

voters who will be served by them. Treating every voter equally as a point of demand makes sense, and avoids the complexity and controversy of weighing some handicaps more than others.

In fact, when a 10th site is added to the model (Map not shown), it is still not optimally placed anywhere near the Prairie View area. Based on where voters live, this site is more properly placed in the unincorporated area of Monaville in Precinct 311, at the Monaville County Building. The level of demand in Prairie View relative to other parts of the county still does not merit the placement of a second site there so long as the Prairie View City Hall site is available for early voting. Strictly based on the distribution of voter residences throughout the county, early voting resources ought to go to places other than Prairie View. Resources for extending early voting are presently limited. Not all nineteen of the Election Day sites can also be made available for early voting, and certainly not for the entire two-week period. When one location is selected, it means some other location is not. Clearly other locations in the county are going without an early voting site because of the decision to give Prairie View more than a single site.

Adding an 11th site still does not award Prairie View a second early voting site (Map not shown). Instead, the 11th site is optimally placed in the far northeast corner of the county serving the burgeoning population concentrated on the Montgomery County border. On the generic basis of where voters reside, optimal service with a budget for eleven early voting sites dictates that the Hockley polling place in Precinct 207 take priority over placing a second site in Prairie View. Certainly there may be challenging administrative issues using this particular elementary school as an early voting location, depending on the characteristics of the facility and the days and hours scheduled, but those concerns are set aside here for purposes of this demonstration.

Of course we know from the history of polling place location decisions in the county, that local election officials do not strictly base their siting evaluations on a simple model of where voters are presently settled. Nor are they required to. Other perfectly valid considerations come into play as

location decisions are made. A big part of these siting decisions is tradition, custom, and a history of high turnout. The list of prospective early voting sites is itself drawn largely from the set of locations selected by previous county administrations. Contemporaneous requests by members of the public and by particular communities are also germane considerations, as are the circumstances surrounding particular elections and campaigns that heighten (or diminish) voter interest. These factors are not taken into account by a model that considers only where people presently live, all weighted equally. Because the placement of polling locations is not reducible to a mechanistic formula, but must consider tradition, local history and changing electoral circumstances, Waller County officials can be justified in giving Prairie View three early voting sites in 2018 while other locations did not get any at all.

Do Hours of Early Voting Influence Turnout?

The plaintiffs appear to simply assume that the hours of early voting must certainly influence the overall level of turnout, and that there must be a straightforward linear relationship between the number of hours early voting is available in a precinct and the level of participation. But the relationship between these two variables is not so simple. In any given election, there is a finite number of voters interested enough to go and cast ballots. Once this number is reached, no additional voters will turn out to vote, no matter how close or convenient the polling place is. For illustration, we can consider two recent mid-term elections, 2014 and 2018. In Figure 3, below, is a scatterplot diagram of the relationship between hours of early voting and overall turnout in the 2014 election. Plainly summarized, there is virtually no relationship between the total number of early voting hours and the percentage of registered voters turning out in that contest. The relationship could hardly be weaker than the one shown here and a careful study of the plotted data shows why.

On the far right side of the Figure 3 plot is the Waller County Courthouse location, the site that is traditionally kept open through the entire early voting period. In spite of these generous hours of

operation, turnout in 2014 reaches only about 36 percent of registered voters (although arguably this was respectable turnout for such a low turnout election year). The next group of cases to note are those that are arrayed at about 25 hours on the X-axis of the plot running from top to bottom on the Y-axis. The bottommost of these is Precinct 309, the Prairie View A&M precinct (Figure 3). Turnout in 2014 is not even at 10 percent. But several other precincts reached far higher rates of turnout with the same or similar number of early voting hours, including 419 in Katy which hit 60 percent (see Figure 3). The third group of precincts to take note of are the ones positioned at zero on the X-axis – those with no early voting hours at all. Yet these too are arrayed at various positions along the Y-axis, from a turnout rate of about 25 percent in Precinct 416 to a rate of 49 percent in Precinct 418. With such variability in turnout at varying numbers of hours, no one can conclude with any confidence that additional hours of early voting would boost turnout. Nor does it help if we exclude the Courthouse site from the data because of its unusually high number of early voting hours. The relationship between early voting hours and turnout remains largely the same: there is no statistically significant correlation between more hours of early voting and greater turnout.

In 2018 turnout is certainly higher across all precincts than in 2014, but the relationship between early voting hours and the percent showing up to vote remains very weak, even slightly negative – the more early voting hours the lower the turnout! (see Figure 4). Locations with no early voting hours at all are again shown on the far left arrayed at 0 on the X-axis. These range widely from Precinct 416 at 41 percent to Precincts 415 and 418 at 63 percent. Two precincts with quite generous early voting hours, Precincts 309 and 417 do not show very high turnout. The Waller County Courthouse building (Precinct 101), open for more than 100 total hours of early voting, shows only middling turnout compared with other locations (Figure 4). In both years, the relationship between total early voting hours and turnout is simply too weak to conclude that adding hours will lead to

improved turnout. There may be other good reasons for allocating additional early voting hours, for instance, to meet the demands of voters who want even greater convenience and flexibility. Election

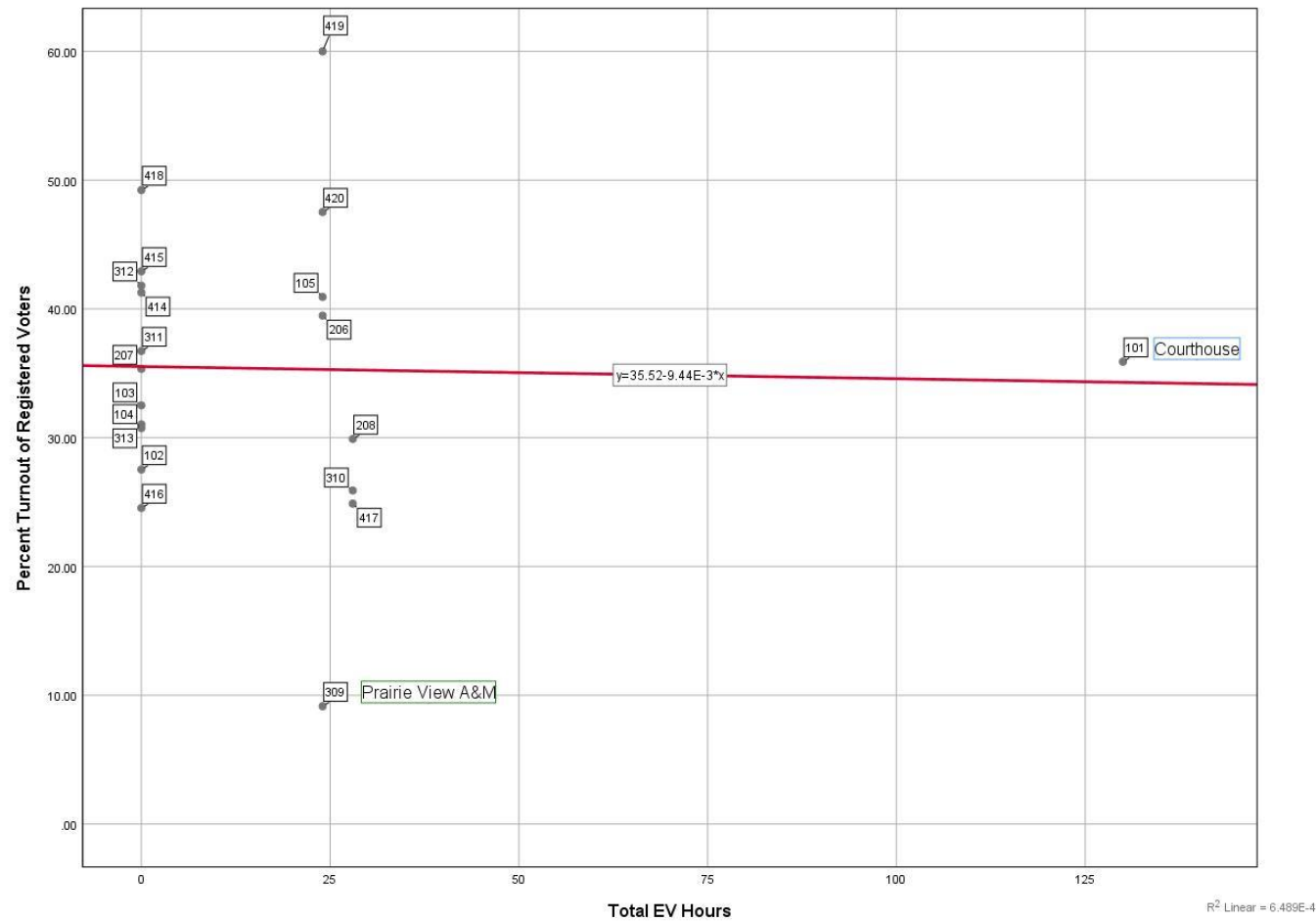


Figure 3. Relationship between Total Early Voting Hours and Turnout in the 2014 General Election, by Precinct, Waller County, Texas

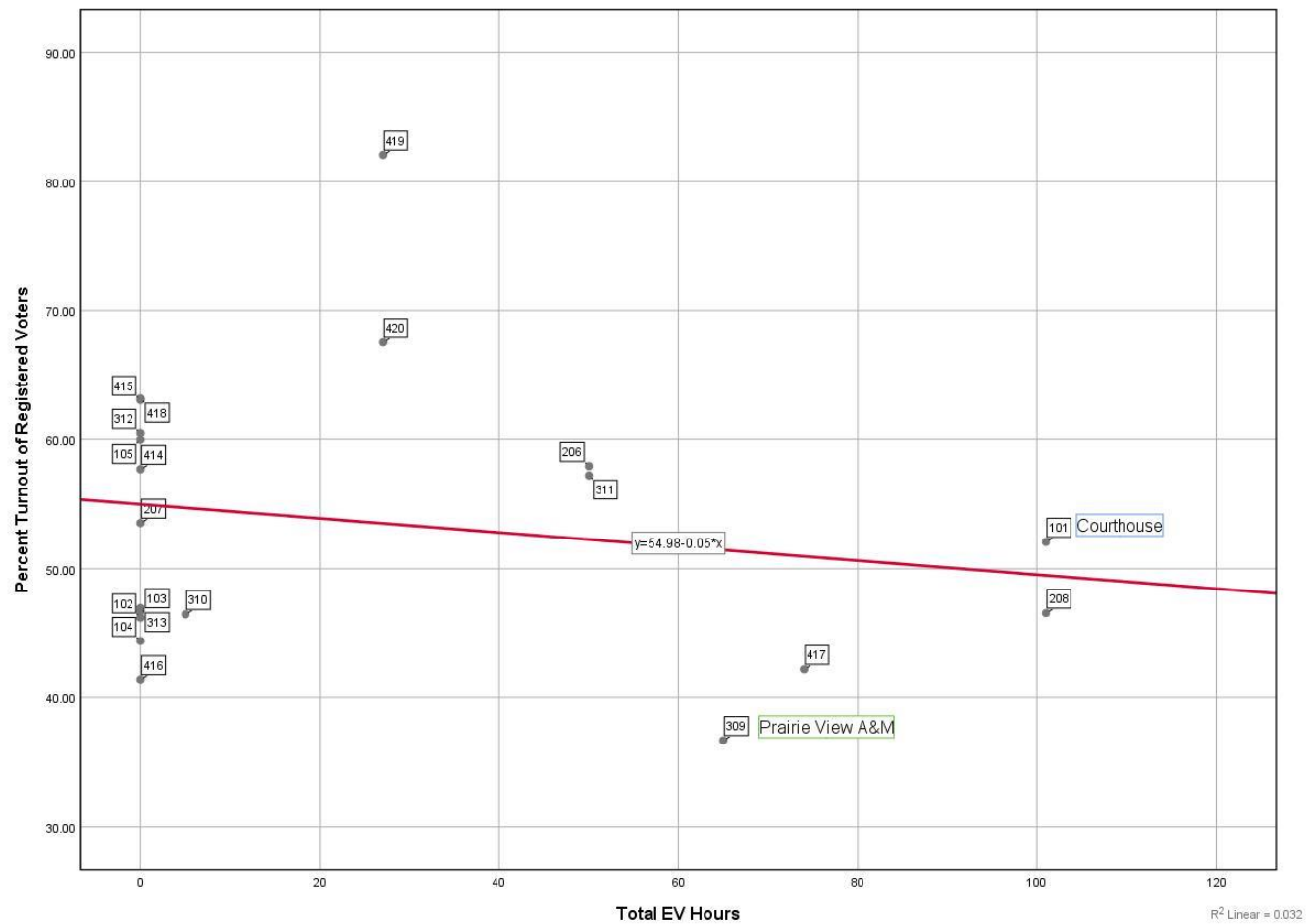


Figure 4. Relationship between Total Early Voting Hours and Turnout in the 2018 General Election, by Precinct, Waller County, Texas

officials may simply want to offer as many early voting hours as is feasible within budget constraints, regardless of its negligible impact on turnout. But it is surely hard to make the case that even keeping the polls open the entire early voting period, as is routinely done in Precinct 101, is going to elevate turnout much over having no hours of early voting at all. Likewise, there is no basis in the evidence to conclude that allocating additional hours of early-voting in Prairie View would have a substantial effect on turnout.

It is conceivable that having more hours of early voting may nominally increase the percentage of votes that are cast early as opposed to on Election Day. Table 7 presents analysis of the relationship between hours of early voting and the percentage of total votes cast early in the 2012-2018 general elections. This is done using least squares regression on precinct level data pooled for the four years, adding controls to capture the distinctive conditions that accompany each election year.⁹ The results show that for each additional hour of early voting, there is a small .096 point increase in the percentage of votes cast early, controlling for the volatile ups-and-downs of turnout across these four years. Figures in the table also show that in the 2014 election early voting use ran 19.8 percentage points below 2012. The 2016 general election ran about 8.8 percentage points, on average, below 2012 in the share of total votes cast early. The 2018 election ran somewhat above ($b=4.339$) 2012 in the percentage of votes cast before Election Day, but this estimate has a substantially sized standard error ($SE=3.094$) *indicating that the estimate is not statistically discernible from zero*. The results in Table 7 suggest that as the total number of early voting hours increases a few more people do cast early ballots as a percentage of the total ballots cast. The relationship is quite modest: if we add ten hours of early voting to a location the average increase in the percentage of votes cast prior to Election Day rises by just less than 1 percent (.96).

⁹ One election year of the four is excluded (2012) to provide the baseline for comparison.

Table 7. Relationship Between Total Early Voting Hours and the Percentage of Total Votes Cast Early in Waller County Precincts, 2012-2018	
(Constant)	57.175 (2.200)
2014 General	-19.825** (3.055)
2016 General	8.832** (3.049)
2018 General	4.339 (3.094)
Total EV Hours	0.096* (0.039)
N=80 F-test=27.35; p≤.001	
Adj-R ² =0.572	
Dependent Variable=% of total votes cast early, by precinct Cell entries are regression coefficients (standard errors) 2012 is the baseline election year for comparison **p≤.01; *p≤.01 Source: Texas Legislative Council and Waller County	

The question then arises as to whether this increase in the convenience of going to vote appreciably increases voter turnout. The data suggest that there is no increase in turnout resulting from more widespread use of early voting, as shown in Table 8. The left side panel of the table reports results of estimating the impact of the percentage of votes cast early on turnout of registered voters across precincts in general elections across the 2012-2018 period. The right side panel presents the results of estimating the direct influence of total early voting hours on turnout, essentially the same relationship as shown in Figures 3 and 4, only for all four elections. In both analyses, the results are statistically insignificant for the percentage of votes cast early, and for total early voting hours. Neither of these variables is positively associated with turnout to a degree that would be statistically distinguishable from zero. As in Figure 4, the relationship between total early voting hours and turnout is slightly negative ($b=-0.034$). Certainly the complex mix of influences shaping each election year

sometimes matters, with the 2014 midterm election showing especially low turnout compared to 2012. But once the vagaries of individual election years are accounted for, neither the extent of early voting nor the number of hours explain the variable level of political participation across Waller's twenty precincts.

These estimates should not be taken to mean that early voting is not worthwhile as a service to make voting more convenient. There are reasons for instituting early voting quite aside from elevating the level of political participation. One might reasonably argue that the act of voting should be made easier even for people who would figure out a way to vote on Election Day if there were no early voting option. But the idea that increasing the early voting hours in the County results in greater opportunity to cast a ballot, and thus increased-turnout, goes down to defeat particularly in the town of Hempstead itself, where the most generous possible hours do very little to mobilize additional voters. Moreover, there is no evidence to suggest that the number of early voting hours allocated by Waller County to Prairie View resulted in less opportunity for voters residing there to participate in the 2018 election.

Table 8. Relationship Between Percent of Total Votes Cast Early and Total Early Voting Hours on Turnout of Registered in Waller County Precincts, 2012-2018			
(Constant)	56.136 (7.686)	(Constant)	60.761 (2.476)
2014 General	-23.604** (4.201)	2014 General	-24.831** (3.437)
2016 General	-2.205 (3.614)	2016 General	-1.505 (3.403)
2018 General	-7.165* (3.507)	2018 General	-6.296 (3.481)
% Votes Cast Early	0.073 (0.125)	Total EV Hours	-0.034 (0.044)
N=80 F-test=16.86; p≤.001		N=80 F-test=16.98; p≤.001	
Adj-R ² =0.445		Adj-R ² =0.447	
Dependent Variable=% of registered voters turning out to vote, by precinct Cell entries are regression coefficients (standard errors) 2012 is the baseline election year for comparison **p≤.01; *p≤.01 Source: Texas Legislative Council and Waller County			

Summary and Conclusions

In summary, this report has used data and evidence to show that Waller County's recent decisions about where to allocate early voting sites, and how many hours to devote to them have not been unfair to the Prairie View community, and Precincts 309 and 310 or in any way abridged the rights of those voters to participate in the political process. It is questionable from examining turnout in 2018 that living close to a polling place, or to an early voting site, is especially relevant to participation in the first place. This is because Waller County precincts are not very expansive, so the distances from home to polling place are not burdensomely long. Still, there is some evidence that those living further away from an early voting site are more likely to vote early, suggesting that these voters may be especially appreciative of the convenience of casting a ballot on a day other than Election Day. However, there is no basis to conclude that the distances faced by voters in Prairie View are any more burdensome than those faced by the majority of other voters in Waller County. The students at Prairie View A&M are almost unique among Waller County voters in the fact that they have early and Election Day polling places very close to the campus where they spend a significant part of their time.

Other evidence in this report shows that Waller County is unique among Texas counties of its size in providing a polling place on a college campus. Surveying the practices of other counties, including larger ones, indicates how uncommon it is to open a polling place at a student campus center, or even as close to the campus as the Waller County Community Center is to Prairie View A&M. That the County has a decades-long tradition of opening a polling place directly on campus dating to at least the 1990s is even more remarkable considering the practices observed elsewhere.

An analysis of early voting site placement should not neglect the important fact that not every precinct can have an early voting site. Voters throughout the county benefit from this service, and in recent elections a majority of voters are observed casting early votes rather than waiting until Election Day. Given the widespread practice of early voting, it only makes sense that election administrators

allocate sites and hours according to some combination of historical tradition, familiarity and demand. Site locations are based on where they have been in the past, the familiarity of particular locations to voters, and the demands voiced by voters, as evidenced either by their regular use of early voting or their petitions to the Commissioners Court. Choices have to be made, priorities set. Opening eight (or nine) sites for a general election in a county this size is unusual. Clearly, Waller County has been very active in extending the service of early voting to its residents, including those in the Prairie View area. It has been far more generous than most comparably sized counties in giving local college students access to Election Day and early voting.

A study of the hours made available for early voting across the county shows no discrimination against the Prairie View area. Though there may be several precincts that receive more early voting hours than the two Prairie View precincts, there are also quite a number that receive less, or even no hours at all. These cases cannot be left out of the comparison unless there is an intent to deliberately stack the deck by ignoring more than half of the pertinent evidence. The distribution of early voting hours to *all* Waller County precincts has to be considered, not just selected ones. Bearing this in mind, the early voting hours in Prairie View do not result in Prairie View voters having less opportunity than voters elsewhere in Waller County to participate in the election. While the number of hours an early voting location is open may have a small effect on the number of early votes that are cast (as a percentage of the total) there is no evidence that increasing these hours has a positive impact on voter turnout. Early voting is a convenience much more than it is a tool for mobilization. Those who seek to close the large mobilization gap between presidential and mid-term years, or between one precinct and another, should surely look for instruments other than early voting to reach that end.

Sources

Amos, B., Smith, D. A., & Claire, C. S. (2017). Reprecincting and voting behavior. *Political Behavior*, 39(1), 133-156.

Ashok, V., Feder, D., McGrath, M., & Hersh, E. (2016). The dynamic election: patterns of early voting across time, state, party, and age. *Election Law Journal*, 15(2), 115-128.

Berinsky, A. J. (2005). The perverse consequences of electoral reform in the United States. *American Politics Research*, 33(4), 471-491.

Brady, H. E., & McNulty, J. E. (2011). Turning out to vote: The costs of finding and getting to the polling place. *American Political Science Review*, 105(1), 115-134.

Brady, H. E., Schlozman, K. L., & Verba, S. (2015). Political mobility and political reproduction from generation to generation. *The Annals of the American Academy of Political and Social Science*, 657(1), 149-173.

Burden, B. C., Canon, D. T., Mayer, K. R., & Moynihan, D. P. (2014). Election laws, mobilization, and turnout: The unanticipated consequences of election reform. *American Journal of Political Science*, 58(1), 95-109.

Campbell, A. (1960). Surge and decline: A study of electoral change. *Public opinion quarterly*, 24(3), 397-418.

Church, Richard L. and Alan T. Murray (2009). *Business Site Election, Location Analysis and GIS*. Hoboken, NJ: John Wiley and Sons.

Drezner, Zvi and Horst W. Hamacher, eds. 2002. *Facility Location: Applications and Theory*. Berlin, Germany: Springer-Verlag.

Giammo, J. D., & Brox, B. J. (2010). Reducing the costs of participation: Are states getting a return on early voting?. *Political Research Quarterly*, 63(2), 295-303.

Green, Donald P. and Alan S. Gerber (2019). *Get out the vote: How to increase voter turnout*. Washington, DC: Brookings Institution Press.

Haspel, M., & Knotts, H. G. (2005). Location, location, location: Precinct placement and the costs of voting. *The Journal of Politics*, 67(2), 560-573.

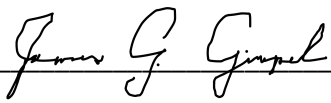
Larocca, R., & Klemanski, J. S. (2011). US state election reform and turnout in presidential elections. *State Politics & Policy Quarterly*, 11(1), 76-101.

Pacheco, J. S. (2008). Political socialization in context: The effect of political competition on youth voter turnout. *Political Behavior*, 30(4), 415-436.

Plutzer, E. (2002). Becoming a habitual voter: Inertia, resources, and growth in young adulthood. *American political science review*, 96(1), 41-56.

Squire, P., Wolfinger, R. E., & Glass, D. P. (1987). Residential mobility and voter turnout. *American Political Science Review*, 81(1), 45-65.

Stein, R. M., & Vonnahme, G. (2008). Engaging the unengaged voter: Vote centers and voter turnout. *The Journal of Politics*, 70(2), 487-497.

Signed  Date 9/10/2019
James G. Gimpel